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REPRODUCTIVE HEALTH UNMET NEEDS AND POVERTY

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COMMITTEE FOR INTERNATIONAL COOPERATION IN NATIONAL RESEARCH IN DEMOGRAPHY

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ISSUES OF ACCESS AND QUALITY OF SERVICES

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Committee for International Cooperation
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About the photo: the photograph was taken in rural Oaxaca (Mexico) in 1992 in the house of the Velasco-García peasant family, five hours after the birth of the baby being fed by the mother. The delivery took place on the same cot with the assistance of the grand-mother also shown on the picture.

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INTRODUCTION

CRITICAL ISSUES SURROUNDING THE RELATIONSHIP BETWEEN UNMET REPRODUCTIVE HEALTH NEEDS AND POVERTY

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In the late 20th century, the perspective of social and demographic research on human reproduction, sexuality and health changed as it gradually incorporated human rights, social and gender inequality issues and a broader range of crucial health dimensions related to reproduction. Concern over women's reproductive health during their various life stages – birth, infancy, childhood, adolescence, adulthood and the menopause – and incorporating men's reproductive health at several stages, was another key innovation. Research and intervention practices were also modified by the involvement of new actors in these issues and by the re-formulation, re-orientation and focussing of social and population policies on the vulnerable and excluded population groups in most countries. Redistributing responsibilities and the provision of certain services among governments, the private sector, civil society organizations, and the family and mainly individuals were novel

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proposals for implementing public policies and programs. The emergence of the reproductive health (RH) concept as a theoretical conceptual paradigm and as an instrumental and operative approach, has contributed decisively to the transformation of this scenario.

Within this context, eradicating or reducing global poverty and promoting fundamental rights to development have emerged at the forefront of almost all current international agendas. At the national level, this problem has also become a priority issue that has led to the positing of major new challenges in both public policies and social movements, as well as in the academic context. Not only does it warn of the complexity, contradictions, tensions and conflicts in the way this issue is dealt with, it also criticizes the simplicity and fallacy underlying the conceptualization, measurement and significance of poverty.

Although economic factors are at the root of poverty, alleviation of the latter is not merely confined to economic processes and measures. Poverty is a multidimensional phenomenon, comprising cultural, social, institutional, political and ideological dimensions. The backwardness and deficiencies in the population's RH components and health services are also an expression of poverty. Unsatisfactory ill-health parameters, low life expectancy, high maternal and child morbi-mortality rates, barriers to access to health-care services and the inadequate quality of the latter, unequal power relations between genders and between the providers and users of these services, backwardness and a lack of response to the needs and demands of the population in the field of health are some of the issues that must be considered when analyzing the links between RH and poverty. In addition, eradicating global poverty requires actions to encourage fairer relations between men and women, to promote the exercise of sexual and reproductive rights, to create more and better opportunities in the various spheres of individuals' lives as well as to develop and increase options, freedom, and individuals' fundamental capacity.

Since most of the world's poor are women, special attention must be paid to their reproductive and sexual status and to their economic, social and cultural conditions. But men should not be omitted. Their participation and responsibility in this sphere and risky practices linked to their reproductive lives and therefore to those of their partners should be regarded as issues that are closely linked. It is also essential to describe the limitations faced by adolescents and young women in the sphere of their reproductive lives, and not only to emphasize those

linked to RH information, communication and counseling. Culturally-based gender and sexuality constructions and the opportunities and life expectations that they perceive have a powerful impact on their reproductive behavior.

Furthermore, the analysis and discussion of the relationship between RH and poverty must be placed within the context of the current national, regional and international debates on the effectiveness and consequences of hegemonic social policies, including those concerning population and health. Neoliberal and structural adjustment policies, the reduction of government resources and changes in their social responsibilities have had unfavorable effects. Not only have they led to growing social inequality and the impoverishment of the great majority of the population, they have also restricted and hampered the implementation of public policies designed to create better opportunities for adequately paid jobs as well as policies aimed at providing suitable, affordable, quality infrastructure and services in health, education and housing.

The above paragraphs embody the framework that shaped the CICRED initiative to carry out an Interregional Seminar on "Reproductive Health, Unmet Needs and Poverty: Issues of Access and Quality of Services," that took place in Bangkok, Thailand in November 2002. Its aim was to enhance understanding of the interrelationships between poverty and reproductive health, by focussing on and identifying the barriers that constrain and prevent vulnerable groups from fully meeting their reproductive and sexual needs, in particular the factors affecting access to and the quality of RH services. The theme of the seminar is undoubtedly a very relevant and ambitious one, since it deals with the relationships of three challenging and highly debated concepts and subjects – poverty, unmet needs and quality of services – with important implications for the reproductive and sexual health of the population. Despite the existence of a vast literature on these subjects, the understanding of the links between them is still insufficient and limited, and often unable to describe their complexity and offer credible and grounded empirical evidences and explanations. The purpose of this monograph is to document selected research outcomes presented and discussed at this seminar and illustrate the wide range of social, cultural, institutional, and gender-specific sources of inequality by considering existing national and local realities among different developing countries.

The aim of this introductory chapter is to point out some unresolved questions concerning the complexity of defining and measuring the concept of poverty and unmet needs that frequently result in partial and inaccurate outcomes and interpretations of their interaction with RH yet constituting key aspects that deserve further rigorous analysis. This is followed by a summary of some of the main findings given by the authors' contributions in this text, in order to offer a more comprehensive panorama of the many and common critical problems that persist when analyzing the links between RH, poverty and unmet needs, as well as their relation to the accessibility of health services.

1. Conceptual and methodological perspectives

1.1. About poverty issues

Since the second half of the 1990 decade, debates on the relationship between population growth and poverty for international agencies, national governments and academic professionals have centered on a dichotomic perspective: the hegemonic position that views population growth or high levels of fertility as a cause of poverty or a major obstacle to its elimination or reduction, or conversely, regards it as a contributor to development. Empirical evidence includes both of these misleading interpretations, and various theoretical perspectives have underlined the need to view this controversial issue as a more complex problem and multi-directional relationship. Similar conclusions have been drawn from the enormous amount of empirical observations and statements about demographic phenomena and behaviors – their intermediate determinants, their causes and consequences – and their link with poverty, as well as in the RH research and intervention field.

The demographic-RH-poverty relationship and the complex issue of its causes, which involves ancient worldviews and arguments, can be examined from various analytical approaches and levels, and for a variety of purposes (Merrick, 2002; Livi-Bacci, 1994; Lipton, 1993; Rodgers, 1984). The traditional analytical perspective, by identifying and classifying individuals, population groups or households, aims to describe the magnitude and characteristics of the poor, or the different poverty lines along which they fold. This perspective is used for mortality, fertility, migration and distribution patterns, or RH components

– maternal mortality levels, contraception practices – in order to compare and differentiate their outcomes and behaviors from other social groups. Likewise, on the macro level, this perspective is related to the unsolved issue of the causal interrelationship between population and development or poverty, including the consequences of the pressure of the growing population rate on resources, the high levels of poverty affecting population dynamics, patterns of distribution and settlement, family structure, mortality and fertility levels, RH characteristics, behaviors and related social dimensions. At the micro level, this relationship is more clearly observed. It comes to the way the effects of poverty on demographic phenomena are suffered, absorbed, and confronted by individuals, population groups and household members, during emigration, sickness, mortality losses, and so on. Changes in family composition, dependency relations, members' roles, their options, expectations, decision processes and therefore in the overall functioning of the family are also key implications. However, questions of causation, regardless of the approaches used, remain a key and critical controversial aspect. RH and demographic outcomes in general are themselves components for defining poverty or can be viewed as consequences of poverty, representing clear indicators of different and varied poverty conditions, of which maternal morbidity and mortality, abortion, migration from poor and marginalized areas are clear examples. However, RH issues or demographic phenomena by themselves, although they can exacerbate, reinforce and reproduce poverty, or conversely can contribute to alleviating or facilitating the emergence from poverty, either at the macro or micro level, should not be regarded, as is still frequently assumed, as a cause of poverty, but as evidence that they are closely linked to or resulting from poverty conditions.

There are at least three crucial aspects that warrant attention in the RH/poverty relationship. The first comprises the self-conceptualization of (absolute) poverty, as the difficulty, impossibility or inability of certain population groups to satisfy basic survival needs and attain a minimal standard of living. Its operational/empirical relative definition is the proportion of individuals or households living below a poverty line, conventionally defined on the basis of the level of household income or household consumption expenditures under which basic, minimum needs cannot be properly satisfied (World Bank, 1996). An alternative operational definition, largely used at the micro level and based on available survey data, particularly where income or expendi-

ture data is unreliable or has not been captured, includes a set of material and socioeconomic indicators[2] assumed as and related to basic needs to assess poverty or poverty lines. Identifying different socioeconomic groups as a proxy conceptual and methodological strategy to describe the economic and social inequalities between individuals, groups of individuals and households has been an analytical research strategy emanating from the enormous amount of evidence showing the link between economic/wealth status, social inequalities, and poverty or the characteristics of the poorest groups with demographic/RH outcomes and behavior[3]. For public policy purposes, it encompasses a strategic tool for defining and focussing their interventions in the poorest population groups for reducing inequalities/differentials and achieving better universal human and living conditions.

However, there are major methodological constraints and challenges for identifying the relative poor and the different levels of poverty among them when using this *economic or socioeconomic* perspective: a) the inherent demographic/RH survey limitations regarding the collection of information, – such as the few imprecise concepts and indicators included or the difficulties of incorporating more accurate ones in

2. Such as household assets, educational attainment, occupational categories and so on.

3. The papers included in this text show the diverse range of analytical strategies and indicators built to assess socioeconomic-poverty status of the population being analyzed. All of them referred to developing countries and in some cases, failed to explain the indicators used to differentiate the population. In some cases, they were indicators that had been constructed in the surveys conducted according to the specific aims of the study (Le Cœur *et al.*, Chapter 2; Anoh *et al.*, Chapter 6; Caldwell, Chapter 7). In other cases, they referred to population groups living in situations of greater poverty, as in the case of the indigenous population, the population in rural or highly marginalized zones, and population groups differentiated by educational attainment and other characteristics (Camarena and Lerner, Chapter 3; Odumosu *et al.*, Chapter 4; González, Chapter 14; Berquó and Cavenaghi, Chapter 15). Other studies refer to highly vulnerable groups, such as women with the highest number of induced abortions (Hoang and Nguyen, Chapter 10) or specific groups differentiated by the degree of development of the areas they live in, without clearly explaining the indicators used to differentiate the population (Htay and Gardner, Chapter 9; Siva Raju, Chapter 11; Odumosu *et al.*, Chapter 4). In another qualitative study, interviewees were distinguished by their belonging to a marginal, popular and upper-middle class sector in two different areas showing the characteristics of each context and the cases studied (Stern, Chapter 5). Also, some of the papers show survey-data limitations and therefore some unclear and imprecise findings observed when examining the link between the economic indexes for assessing poverty and the RH outcomes.

order to better assess poverty-sensitive dimensions associated with the RH approach; b) the need to consider the criteria used both for weighting the assets or indicators used in constructing indexes, and for determining the cut-off points for classifying individuals or households into quintiles comprising the various socioeconomic status groups; c) the frequent lack of awareness of the meaning and restrictions of the concepts and indicators we are using and of what we are measuring, bearing in mind the fact that each indicator measures a somewhat different dimension of poverty (Hancioglu, Chapter 1); and d) the fallacies when analyzing the association of circumstances and behaviors with different sequence and timing (Schoumaker and Tabutin, 2003). When comparing various levels of poverty or socioeconomic status between population groups within a country or across countries, more caution is needed, as socioeconomic-poverty index or measurement may have different connotations.

The second, most complex and crucial issue concerning the RH/poverty link is related to the elements embedded in the definition of the reproductive health approach, which includes dimensions such as the ability, satisfaction and safety of sexual life; the capacity and freedom regarding reproductive behavior; and conditions related to reproductive rights, safeness, effectiveness, affordability and acceptability regarding information and access to contraceptive methods for the regulation of fertility which are not against the law, and rights for accessing appropriate health care services. In other words, this definition comprises ethical, philosophical and psychological dimensions embodying self as well as intra-subjective perceptions, motivations, capacities, assessments. It refers to legal aspects, education/information programs, and the availability of appropriate health-care services. And finally, in terms of the RH/poverty link, it raises major, more complex issues. It warns us about the complexity and implications, explicitly and implicitly, underlying the traditional conceptualization and measurement of poverty, a fundamental economic perspective but a *reductionist* one, as well as the need for a broader comprehensive and multidimensional approach, considering that poverty, as well as the RH approach, is the result of many interrelated political, social, cultural, ethical, institutional and gender dimensions, in addition to economic ones, within which poverty is rooted and reproduced (Hancioglu, Chapter 1; Le Cœur *et al.*, Chapter 2; Camarena and Lerner, Chapter 3; Odumosu *et al.*, Chapter 4; Stern, Chapter 5; Gómez, Chapter 13). One

of the research conclusions about the role of health-care institutions in RH outcomes has pointed out the need to incorporate other perspectives, such as, for example, the cultural poverty that prevails in these institutions, namely the insufficient, inappropriate medical, social and ethic culture in them and their health staff. Likewise, the absence of a reproductive culture by men and women, as a result of insufficient and inadequate knowledge and information, and in particular, the unawareness of risk and complications, related to their health and bodies in reproduction aspects, are other crucial issues that have yet to be explored (Lerner and Quesnel, 2003).

The third aspect derives from both the aforementioned elements regarding the RH approach, and the partial, restricted and unsatisfactory outcomes when considering the classical socioeconomic indicators for fully addressing the adverse and worsening living conditions in which a large number of women and men find themselves. It includes broader innovative and different conceptual perspectives for analyzing the theoretical and empirical grounds of poverty, human needs, standard of living, and the constituents of the determinants of social life, which may seem more appropriate and relevant for assessing the RH/poverty link. However, it is beyond the limits of this introduction to address some of their main arguments, that now occupy a central position in the broad debates on this issue and in the vast literature on the subject. That is why we shall limit ourselves to pointing them out. They include theoretical frameworks and definitions, such as the approach originally developed by Sen on human needs, capabilities and functionings (Sen, 1980, 1992, 1997), as well as on the concepts and perspectives of "Social Exclusion" (De Haan, 1998; Gore and Figueiredo, 1997; Oliveira, 2001) and "Social Vulnerability" (Stern, Chapter 5). It is also interesting to note the preliminary ideas and exploratory outcomes put forward by certain specialists in the sociodemographic field, including some of those in this book, for linking some of these concepts and approaches in order to explore and explain demographic events, and showing their potential for analyzing new avenues about the relationship between poverty and RH and their implication for population and RH policies. However, conceptual and methodological challenges as regards implementing these concepts and approaches remain a further crucial research task to be addressed (Das Gupta, 1999; Livi-Bacci, 1994; Oliveira, 2001; Le Cœur *et al.*, Chapter 2; Camarena and Lerner, Chapter 3; Stern, Chapter 5). It is worth add-

ing that these conceptual perspectives are also useful for analyzing and understanding both RH needs and accessing quality health services.

1.2. About unmet RH needs

This is also a long-standing issue in demographic research, which has been, and still is, a central programmatic and policy tool for focussing interventions on the reduction of fertility. That it is closely linked to RH/poverty approaches and debates is not surprising, since it has emerged from the hegemonic, population-driven perspective centered on reducing population growth and as a mechanism for reducing poverty, mainly through the expansion of contraceptive methods (Camarena and Lerner, Chapter 3). Based on this perspective it is also hardly surprising that it should have such a narrow and reductionist approach, restricted to addressing unmet need for contraception (UNFC) and mainly encompassing aspects of supply and demand for family planning (FP) services, where researchers, policy makers and health providers make inferences about women's UNFC derived from several questionnaire items, according to the conventional definition. Its restrictive feature is also related to the interventions that until recently, only targeted married women of childbearing age, and excluded other women in other life stages as well as men, with similar if not greater needs and risky situations.

As part of women's civil society movements and as a result of the ICPD Program of Action where the RH approach achieved its more universal institutionalization and legitimation, the unmet need (UN) concept has reached a broader and more appropriate conceptual development of what should constitute the RH approach on this subject, and could enhance policy interventions. Some key analytical axes have been proposed in these directions, considering *Needs for whom? Needs by whom? Needs for what and/or based on what RH components?* (Dixon-Mueller and Germain, 1992; Robey *et al.*, 1996; Camarena and Lerner, Chapter 3; Stern, Chapter 5; Gómez, Chapter 13). Emphasis should be placed on differentiating the specific needs of adolescents, young and old women and men, regardless of their marital and sexually active status, including also breastfeeding and pregnant women, those with induced or natural abortion, and other specific population groups such as commercial sex workers. The specificity of the needs of women with the worst and most adverse vulnerability and poverty conditions, such

as the indigenous ones, those living in marginalized rural and urban areas, or other discriminated and socially excluded population groups, such as commercial sex workers, ought to be accurately identified and dealt with.

Women's and men's own views on their RH needs, as well as health providers' voices, perceptions, definitions and practices on this matter should be carefully analyzed and considered in order to bridge the gap between societal and national goals, concerns and needs versus the individual/family and private needs. In this respect, alternative methodological approaches have been suggested due to the limited meaning and findings obtained from survey data. Qualitative approaches to investigate perceptions, attitudes, satisfactions, desires and other sensitive, intimate issues, particularly for learning about needs defined by women and men themselves, are required for a more comprehensive understanding of RH needs that will also contribute to survey design. The RH approach should encompass a full array of research topics to determine individuals' needs in their sexual and reproductive life. Reproductive goals and desires; clear and precise information about the advantages and disadvantages of contraception methods, particularly their side effects; the right to free, informed choices, without any direct or indirect imposition by other social actors; free access to them including the non-reversible methods; and prenatal, childbirth and postnatal quality care services, are crucial issues not fully or properly endorsed yet. In addition, and within the broad concept of reproductive health, prevention, detection and treatment of STDs, HIV-AIDS, cervical-uterine cancer and breast cancer, domestic violence have emerged as issues of growing concern where unmet needs are most keenly felt. Although health institutions and providers are the main entities responsible for dealing with women's and men's health needs, other institutions such as the legal, political and educational ones have also an important role to play in this respect. As in the case of the concept of poverty, the concept of needs should also be viewed and analyzed as a multidimensional one, not limited to FP or maternal health services related to reproductive events, embodying other RH critical problems and including the cultural, social, political and ideological forces influencing them[4]. Moreover, as Gómez notes,

4. Most of the papers included in this book deal with this subject, assessing it with different purposes and in-depth analytical levels: some of them address it explic-

needs in a broader sense are related to gender equity, access to resources, sustainability of human development, and therefore gender as well as social inequalities are an inherent and essential requirement of any research and political agenda in this field (Chapter 13). The task of meeting needs is certainly a difficult methodological challenge, but also an undeniable requirement for the advancement of both agendas.

2. Overview of papers

The summarized content of the papers presented below illustrate the diversity of subject matters that were discussed at the seminar, providing striking evidence of the poor RH conditions prevailing in different social and geographical contexts and population groups in developing countries. They provide an overwhelming description of the vast and complex gender, social, cultural, ideological and political dimensions, as well as the diverse social actors that prevent people from meeting their needs and their access to quality health services, and shape the implementation of population/RH policies and programs, highlighting some of their achievements and constraints. Despite the specificity of the different demographic, political and social realities being considered, many of the behaviors, patterns and implications being observed are surprisingly similar, a fact that suggests the powerful effect of social inequalities, vulnerability situations and poverty conditions. The findings and conclusions of these papers offer new avenues, and relevant and innovative questions in the field of research and policy interventions.

2.1. Conceptual and methodological issues

Two papers are included in this section, the first one centered on the measurement of economic status for analyzing and differentiating poverty conditions, a conventional, restrictive and orthodox perspec-

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itly, as an analytical subject matter by itself (Camarena and Lerner, Chapter 3; Odumosu *et al.*, Chapter 4), others as a close and central element related to the subject of their main concern (Stern, Chapter 5; Anoh *et al.*, Chapter 6; Caldwell, Chapter 7; Sundby *et al.*, Chapter 8; Htay and Gardner, Chapter 9; Hoang and Nguyen, Chapter 10; Gómez, Chapter 13; González, Chapter 14), and the rest of them provide relevant implicit inferences about this issue.

tive which still poses a major conceptual and methodological challenge in RH research. The second one presents an interactive methodological tool that provides a more comprehensive and dynamic approach to analyzing reproductive behavior and vulnerable conditions. Three other papers described below offer, as part of their content, complementary and suggestive conceptual developments. The one by Stern (Chapter 5) focusses on the relevance of the concept of social vulnerability, its relation with poverty, as a broader and more realistic approach to analyzing reproductive health behavior. The other one by Camarena and Lerner (Chapter 3) discusses, in its first section, the vast shortcomings of the conventional conceptualization and research on the population's unmet RH needs, providing clues to assessing and understanding this subject within the RH approach. The third one by Gómez (Chapter 13) offers an innovative and broader conceptual perspective for addressing women's social inequities and inequalities, related to their needs and adverse circumstances in accessing resources and health services.

As part of the discussion on the performance of diverse statistical approaches for identifying socioeconomic strata and their correlation with RH components, *Attila Hancioglu (Chapter 1)* examines and compares several asset-based indices used to measure the economic status/wealth status of the household, a common and analytical proxy tool for identifying and inferring poverty levels, outlining their advantages and disadvantages. Using data collected from the Turkish Demographic and Health Survey, Hancioglu's findings show that although economic status appears to have net and significant effects on reproductive health behavior, none of the indexes used can be preferred over the others in terms of their strength in predicting reproductive health behaviors, and that the more sophisticated index was in no case the best predictor. From the author's paper we learn relevant aspects to be carefully and strongly considered. He warns us that when making a comparison between different social contexts within and across countries, we should bear in mind what we are measuring and comparing, which assets to include or exclude according to the purpose of the research as well as the population group to be analyzed. His main conclusion seems to be to use simple, more intuitive indices, bearing in mind that each one measures a somewhat different dimension of poverty. Other major problems insufficiently resolved include the lack of adequate and relevant concepts and indicators in the data collection

processes in order to obtain a more comprehensive and realistic situation of poverty. Efforts should be made to take into account, not only which economic assets/variables to include or exclude, in order to improve the measurement of household economic status, but also other variables related to the multidimensional nature of poverty, particularly as regards health institutions.

Using a similar conceptual perspective to Stern (Chapter 5), but with a different and very relevant methodological approach, *Sophie Le Cœur, Wassana Im-Em and Éva Lelièvre (Chapter 2)* explore the interaction between HIV and vulnerability in Thailand. Vulnerability is conceptualized as the sociocultural, psychological and economical circumstances that lead to or define individual behaviors, which the authors regard as a broader concept of poverty. Using the life-event history approach complemented with in-depth interviews, the authors analyze the interaction of social and individual vulnerable circumstances viewed as dynamic continuum of events that evolve during the individual course of life, which expose individuals and couples to the risk of acquiring HIV. Their study also includes an epidemiological approach (case-control design), which involves interviewing and comparing HIV-infected mothers and their partners with couples with similar characteristics who are not infected, living in rural and urban areas of Thailand. Reporting on preliminary analysis the authors substantiated the feasibility and importance of using both methodological approaches, to analyze vulnerability conditions and network support in the context of HIV infection, since they found that life-events that appeared significant in predicting vulnerability did not differ much between cases and controls. Their findings show that higher geographical mobility, lower education level, having first intercourse with a partner other than one's spouse, absence of condom use at first sex and complicated marital life are some of the circumstances of vulnerability towards HIV. What is more worrying and requires further analysis is their results about the solidarity networks, where they observe that family links were loosened after HIV disclosure, meaning that HIV-infected individuals extended their network outside the family in order to obtain support from the community. This text is an important methodological contribution that should be considered a better alternative to the conventional quantitative survey. It offers more comprehensive and dynamic information for analyzing reproductive health components that allows for a much better articulation regarding the sequence and timing of individual so-

ciodemographic characteristics and poverty indicators, including the various social processes and actors that intervene and, therefore, providing a much better interaction of the diverse conditions which favor, protect and intervene against adverse RH outcomes in an individual's life history.

2.2. Challenges in reproductive health needs

Documenting unmet needs for contraception has been a vast research area, and a prominent and central programmatic tool for focussing policy actions. The extended debate on this issue, its definition and implications, are associated with the emergence of the RH approach. What is or should be its meaning and scope within this approach? What are the main causes of and constraints on fully responding to the unmet RH needs of different population groups?

The conceptual reflections as well as the empirical evidence offered by *Rosa María Camarena and Susana Lerner (Chapter 3)* are thought-provoking as they highlight needs and uncertainties in some crucial RH aspects. They point out to the shortcomings of the simplistic and conventional conceptual schemes and methodological approaches regarding the concept of unmet needs and they offer a broad, critical picture of the unsatisfied needs associated with the enormous social inequalities in the rural and marginal context of Mexico. In the first part of their paper the authors discuss the concept of unmet needs in light of two paradigms. The first one, "the population-driven forces", is a population and public policy approach focussed on reducing population growth through fertility control and oriented mainly towards the expansion of contraceptive coverage. Within this paradigm, population needs were basically defined as a societal, national and public concern. Therefore, as the authors argue, it is not surprising that the concept of unmet need for contraception (UNFC) has become a central policy tool for designing, justifying and implementing FPP, focussing its interventions on certain population groups and assessing the impact of these programs on the fertility changes observed. Moreover, they reiterate, as many other authors have argued, that this is a concept that seeks to identify women who are at risk of having unwanted pregnancies, yet nevertheless it is a concept not defined by women themselves but one attributed or imposed on them by researchers and those responsible for FPP who deduce it from the real or apparent discrepancy

between women's contraceptive practices and their stated desire to stop or delay childbearing.

The second paradigm, based on the "reproductive health approach", focusses on the individual's reproductive needs and rights, particularly those of women, which do not necessarily coincide with those defined by public concerns. Population needs are defined mainly as individual concerns meaning, as the authors state very clearly, that when talking about unmet needs, the key questions to be addressed in the research and policy field are: Needs for whom? Needs by whom? Needs for what reproductive health components? Needs with what objective and assumptions? Linked to the RH concept and approach adopted at the ICPD in Cairo, the authors highlight a set of complex and challenging questions and implications which deserve rigorous research efforts to achieve an innovative and more comprehensive understanding of population needs, and more adequate interventions in the reproductive field, in order to deal with the relationships between unmet reproductive health needs and poverty.

With this conceptual frame in mind and using data from a rural survey carried out in Mexico's marginal rural areas, in the second part of their paper, the authors provide a broad picture to explore some of the most precarious circumstances faced by women as regards various aspects of their reproductive health. Their main interest is to show how in a country like Mexico that has implemented a successful family planning policy, responding to women's demand for contraception and achieving high contraceptive coverage and a relevant and rapid decrease in their fertility levels, women still have many unmet RH needs. By using an unconventional demographic analytical strategy, they highlight the discrepancies, ambiguities and uncertainties yielded by survey data. Their findings indicate that depending on the criteria used to define and estimate UNFC, the results not only differ widely, but show the greater segmentation and exclusion of certain population groups regarding their contraceptive needs, such as indigenous women, those with less access to education, and those that lived in a context of weakness or lack of reproductive health services, or where social and cultural barriers to accessing these services have not been overcome. They explore an almost neglected issue in FP related to the tension between national concerns and interests versus the individuals' reproductive goals, but an important one for the RH perspective, particularly as regards people's reproductive rights.

Regarding the needs of other RH components, the authors' findings reveal some highly questionable practices in health-care facilities illustrating the lack of freedom and vulnerability women face when opting for a contraceptive method. The influence and in some cases the imposition by health entities and professional staff mainly for sterilization, which largely occurs immediately after childbirth or Caesarean sections, the narrow range of other reversible, effective contraceptive methods at health facilities and the lack of information and counseling about the advantages and side effects of each method, are also some of the critical unmet needs found among the poorest, indigenous and non-educated women, indicating the persistence of social inequalities, social backwardness and inadequate health services in rural and marginalized contexts. Of special interest are the findings the authors offer on the doctors' rationale that warrant further research to shed light on the circumstances and social actors that participate and influence women's options, that will allow the gap between societal, institutional and individual needs and interests to be bridged.

As part of the conclusions, the authors provide a number of useful suggestions for further research As for the links between reproductive health and poverty, they suggest the need to work on a multidimensional perspective of the latter, not restricted only to the analysis of material conditions, but stressing the cultural, social and institutional poverty conditions which also create unmet needs and adverse outcomes. Special emphasis must be placed on contemporary forms of marginalization, such as social exclusion and vulnerability related to the globalization and economic restructuring processes.

As in many underdeveloped contexts characterized by a patriarchal dominance, where a high value is still placed on the number of offspring, men's health and reproductive behavior has become a core research and policy area. *O.F. Odumosu, A.O. Ajala, E.N. Nelson-Twakor and S.K. Alonge (Chapter 4)* argue that in a country like Nigeria that seeks to reduce population growth and improve child and maternal mortality, it is very difficult to reduce the number of offspring to four, as stated in the revised population policy of 1998, in view of both the considerable male control over sexual and reproductive issues and of the social and cultural features of the patriarchal society. Using survey data collected among married men in certain major urban areas of Nigeria, one of the countries with the highest rate of poverty and the lowest development index and currently situated in a pre-transitional demographic

stage, the authors explore certain aspects of unmet contraceptive needs. Among their main findings they indicate that the high value placed by men in a large number of children, the high rates of infant mortality, the greater influence of religion among Muslims and the persistence of polygamous unions are among the main determinants of the high levels of male desire for more children. Therefore, it is not surprising that using the simple and conventional definition of unmet needs of married men, the UNFC estimate applies to half of the population considered. In addition, the authors state that the high levels of material and institutional poverty, such as the shortage of health services and trained professionals, the powerful ideological control by religious institutions, and the very recent population policy and interventions regarding FP are among the main barriers hindering free individual reproductive choice and decision-making process, and thus, which in turn makes it more difficult to assess their RH needs.

Despite this scenario, the authors conclude that the desire to space or limit childbearing is becoming more visible, due mainly to the restrictive economic and social policies that have led to an increasing impoverishment of the population. Therefore, unless changes take place both in the population context and the institutional health one, high unmet needs for contraception, particularly among the poor sector, will mean that the population target of four children will only be achieved through recourse to abortion among couples who wish to limit childbearing. A worrying issue, which is also closely related to the perceived health risk of using effective modern contraception methods, and which will probably tend to outweigh the risk of unplanned pregnancy, or abortion, which is currently illegal, although available.

2.3. The determinants of reproductive and sexual behavior among adolescents and youth

The consequences of the sexual and reproductive behavior of adolescents and youth have occupied a prominent place in research and intervention, particularly in developing countries. Nevertheless, the picture that emerges of these issues, particularly their link with poverty, is still insufficient and often over-simplistic. What are the underlying causes and circumstances that lead these population groups to engage in unprotected sexual practices that result in unwanted, unplanned and early pregnancies or provide a greater risk of contracting STDs, HIV

and AIDS? What are the vulnerability conditions that differentiate these behaviors between the various socioeconomic strata to which adolescents and youth belong?

Claudio Stern (Chapter 5) raises two issues concerning teenage pregnancy and its link with poverty. First of all, he argues against those who regard teenage pregnancy per se as an unwanted problem, with negative individual and social consequences, as in some specific social contexts pregnancy is regarded as the best option for adolescent girls. Secondly, he points out that also the age at which pregnancies occur is not the problem, but rather the result of material conditions, institutional determinations, pre-existing cultural constructions and the subjective experiences that determine the range of options available to teenagers in the event of an early pregnancy, which largely depend on their position in the social structure. Stern strongly underlines the need to contextualize teenage pregnancy by placing it within the specific, highly diverse social and cultural conditions of the country and of the various social groups in which teenagers live, in order to answer key questions, such as: What are the problems concerning teenage pregnancy? For whom do they constitute a problem? Who can and should do something? and What are the underlying causes of teenage pregnancy?

In an attempt to offer a better understanding of the relationship between poverty, social inequality and the occurrence of adolescent pregnancies, the author explores the use of the concept of "social vulnerability", arguing that this concept is a more useful one for analyzing and understanding differential behaviors, meanings, causes and implications of an early pregnancy among various social groups than the traditional concept of poverty. By using qualitative data from in-depth individual interviews, he describes and analyzes some of the main familial and social circumstances and events in the life history of one young girl in each of the three sociocultural contexts in Mexico – a marginal urban community, a popular urban sector and an upper-middle class one – that serve as the basis for revealing the social characteristics that predispose or protect young females in these contrasting sectors from becoming pregnant and from giving birth early in their lives. The comparison between the social and family environment of great poverty, vulnerability and violence in the urban and marginal sectors, and the upper-middle class living conditions and diverse life options provide very clear insights into the differences in circumstances between the so-

cial contexts that make young girls from various social sectors of the population more or less susceptible to adolescent pregnancy.

The author's findings point out that a combination of a series of factors and events, such as staying at school during adolescence, the high value placed on education, and, in particular, the presence of stable, trustworthy social networks intervening as protective factors, makes teenage pregnancy less likely. Conversely, family disruption, domestic violence, migration, alcoholism, or low aspirations, the poor quality or lack of support from many of the school's staff, are circumstances that increase vulnerability, especially in the context of extreme poverty, and tend to increase the likelihood of early, unwanted pregnancies. In addition, the limited, inadequate information and knowledge on sexual and reproductive issues, particularly of protective measures to prevent a possible pregnancy, the unawareness of the risk of becoming pregnant, the lack of parental communication, the inability to negotiate protected sex with partners, and limited personal life perspectives beyond marriage and maternity, are among other key vulnerability factors that play an important role and reflect the conditions of most young girls in the more marginalized and poor contexts. Of particular note is Stern's finding about the importance of "confidence" in the partner, as part of likelihood of engaging in unprotected sexual relations that prevails in all the social contexts analyzed.

Based on his analysis, he also proposes certain dimensions of social vulnerability that could be defined as variables to be used in further studies aimed at looking more systematically at the relationship between poverty, social vulnerability, and adolescent pregnancy. In the research area, he indicates the need to define the concept of social vulnerability, its dimensions and its relationship with poverty and adolescent pregnancy, as well as to analyze through qualitative approaches adolescent pregnancy within the broader context of social inequality and poverty, taking into account the political and ideological environment, and the ongoing process of social and cultural changes. Regarding policy implications, aiming at reducing vulnerability to teenage pregnancies, he suggests that programs should be designed to take into account these diverse needs, possibilities and conditions among the various social groups, including those that would help girls remain at school, provide vocational training and income generating activities, and make sexual and reproductive counseling available.

Unlike Claudio Stern, whose findings are drawn from qualitative and ethnographic evidences to analyze early pregnancy and risky sexual practices as part of adolescents' sexual and reproductive behavior, *Amoakon Anoh, Édouard Talnan and N'Guessan Koffi's (Chapter 6)* analysis is based on a quantitative approach. Using data from a survey on STI/HIV/AIDS undertaken on male and female youth aged 15-24 in three main cities in Côte-d'Ivoire, their main purpose is to explore the relationship between socioeconomic living condition and early first intercourse, multiple partners and condom use. The authors identified three socioeconomic strata according to the youth's parents' or their living conditions on the basis of which they sought to determine whether the financial and social situation in which young people live influences their sexual behavior and consequently, whether youths with the most adverse living circumstances are more likely to adopt risky sexual behaviors than those with better living conditions. Contrary to most evidence found in the literature, their findings show that young men with higher levels of education engage in first sexual intercourse at an early age, whereas women in more precarious economic conditions have their first sexual intercourse at an earlier age. Regarding condom use, no significant statistical differences were found due to living conditions, suggesting that other factors, such as confidence in their partner or the fact that men tend to ignore pregnancies resulting from condom use, leads to the rejection of its use. When sex differences are considered, the most vulnerable conditions and the greatest sexual risks are found among young females.

The authors suggest the need to deepen our understanding of risky sexual practices using the qualitative research approach, by considering the influence of social and gender inequalities and defining better indicators for the specific conditions of vulnerability and poverty among youngsters. At the programmatic level, they recommend the need to design and implement policy actions to reduce poverty, by offering different opportunities and choices to youngsters, mainly to female youngsters, in order to prevent risky behaviors as well as to design educational and communication strategies that will help change prevailing norms, values and practices regarding sexual behavior.

2.4. Access to and quality of health services

Granting exclusive responsibility to public health institutions for the implementation of FPP/RHP has been a major determinant in achieving extended or universal population access to professional care services, particularly among the poorer sectors. Their vital role in reducing and avoiding multiple infant and general morbidity and mortality incidents, and intervening as key actors in reducing fertility levels, through the expansion of contraceptive practices and procedures and meeting men and women's reproductive needs cannot be denied. Nevertheless, despite major improvements in health and FP/RH services in recent decades, there is still a great deal to be done to guarantee the minimum standard for high-quality reproductive health services. Geographical and physical availability, monetary and indirect costs, perception of risk and motivation to seek sexual and reproductive health care, fear of side effects and medical practices, limited choice of methods, knowledge and counseling on contraceptive methods, prevention, detection and treatment of other RH components, technical competence of health providers, interaction between them and users of health services, are just some of the many crucial issues that need to be considered regarding access and quality of RH services. Likewise, social and gender inequities, coercion, discrimination, malpractices, insensitivity to cultural conditions in many health-related issues, such as domestic violence, are some of the major critical problems as yet unsolved. What are the material and non-material restrictions on implementing a more comprehensive RH approach at the health institutions? How do economic, social, political and cultural factors intervene in access to quality RH services? What are the main barriers preventing vulnerable groups from accessing quality RH care and fully meeting their reproductive and sexual needs?

Addressing the key issue of maternal mortality as one of the ultimate consequences of unmet needs in reproductive health in most of the underdeveloped countries, *Bruce K. Caldwell (Chapter 7)* examines and discusses the provision of maternal health services in Dhaka City, focussing on antenatal care (ANC) and delivery services, as the main determinants on the supply side associated with maternal mortality. First, based on findings from the DHS, the author provides an overview of these issues in Bangladesh, illustrating the adverse conditions women face regarding ANC and delivery services, which are further

exacerbated in rural contexts. He also offers some interesting findings on religious and cultural beliefs and practices concerning childbirth which are essential elements for understanding women's behavior. Of particular interest are the author's arguments about the bias and inadequate programmatic interventions, that prevailed until recently, which ignored the powerful link between children's and family wellbeing and mother's health, and failed to recognize women's needs and demands, particularly those related to their health conditions. He also notes the scant attention paid to the community activities of nurses and midwives in their important role of attending ANC and deliveries and in referring women to hospitals in the event of complications.

In the second part of his text, Caldwell explores the scenario in the poorest areas of Dhaka, posing some critical questions that guide his analysis: Why do women, particularly poor ones, not use the facilities available? Why do they fail to obtain the care they require? The author's analysis is based on a combination of quantitative and qualitative approaches: a survey undertaken in urban poor areas of Dhaka in 1999 of a group of ever-married women of reproductive age, whose last childbirth was attended by trained health professionals and a second group of women who have not been attended by them, in-depth interviews conducted in both groups, and an additional survey undertaken of a number of *dias*, traditional birth attendants. The differentiation made by the author within the *bosties* areas (poorer ones with less health facilities) and the poor areas defined on the basis of an index of household possessions, illustrates the heterogeneous RH conditions within both slum-urban areas of Dhaka. His findings show the worst ANC and child delivery services prevailing among the women, particularly in the poorer areas. More striking are the reasons for not using the medical resources available, such as the fact that women were not convinced of the value of using trained attendants or institutional delivery, a fact associated with their perception of pregnancy as a natural phenomenon not requiring intervention unless risky signs are evident.

Women's testimonies suggest that it is a combination of factors that influence their decision to use maternity services, such as the lack of confidence in health providers' skills, their concern about the costs involved, and their perception of hospital environments as tough, unfriendly, isolated, and contrary to their traditional customs and practices. In addition, the author notes that social stigma for women accessing delivery services, fear of medical treatments, the disruption

of traditional family and gender roles, interfering with women's responsibilities and domestic activities, are among other reasons that explain women's preference for giving birth at home. The paper makes relevant recommendations about the changes that need to be made at different levels of institutional health facilities as well as at the community level in order to respond to women's needs and their specific local circumstances that will enable to provide better maternity services and help reduce the risks of maternal mortality.

The paper by *Johanne Sundby, Emmanuel Rwamushaija and Momade Bay Usta (Chapter 8)* is an important operational research contribution and an excellent example of a large-scale, multi-disciplinary RH program that was implemented in a maternity hospital in Maputo City, Mozambique. The authors describe not only the inadequate and insufficient material and human health infrastructure conditions and access to quality health reproductive services, which prevailed prior to the implementation of the program, but also they show what can be achieved in a context of poverty in order to improve maternal services, mainly for reducing maternal mortality, and the challenges to be dealt with by the program to ensure its sustainability. Their main argument is that in most poor countries, like Mozambique, maternal and perinatal morbidity and mortality are invariably linked to medical problems or risks that can be handled and often avoided during antenatal care and that positive outcomes are entirely dependent on health facilities' ability to respond to maternal urgencies. The paper describes the various changes and improvements in maternity services, whose outcomes are reflected mainly by the overwhelming patient demand, proving both the need for qualified services and that women utilize them once they are there, since they feel they will be properly attended if they have the need and the choice. Although , as the authors point out, these changes have also led to a higher burden on current staff and to an urgent need to reorganize human resources and financial allocations, and in particular to develop comprehensive and integral RH programs that include changes in emerging factors like HIV/AIDS that are also related to high maternal morbidity and mortality.

Despite all the improvements and successes achieved, several crucial challenges demand a more systematic, comprehensive evaluation of the various interventions, their cost, effectiveness, sustainability, and affordability to expand similar actions in other countries. As the authors recognize, this is a very expensive project whose financial re-

sources depend on external aid and which is also subject to changes in economic and health reforms and policies both internally and externally defined. Nowadays, the restrictions imposed by international institutions that are largely dependent on external financial and human resources for providing better quality health care in developing countries, and the current financial restrictions found in many underdeveloped countries, raise several urgent questions: How will the changes and successes, like those described in this paper, be sustained when external funding is withdrawn? What are the possible inputs from the government of Mozambique for supporting this program? In the face of external pressures to decentralize health services and the current critical financial situation of underdeveloped countries, how and with what resources can similar projects be implemented in other urban and rural areas with more adverse conditions within this country, as well as in other underdeveloped ones?

Using a different perspective but one also based on an interventional research project, like the one above, *Thein Thein Htay and Michelle Gardner's* (*Chapter 9*) paper focusses on access and quality in health services in Myanmar for spacing and limiting births in order to document some of the constraints on the provision of reproductive health services. Using quantitative and qualitative data on two townships, the authors show a range of actual and perceived service-related factors that influence user's access to and choice of contraceptive services. Differences between the two contexts illustrate the greater barriers to women's access and choice of contraception in the more rural setting, such as the lack of adequate trained health personnel and appropriate facilities for providing methods other than oral and injectable ones, geographical and physical limitations to access health facilities, and lack of confidentiality and poor quality health-care services. Contraceptive costs seem to pose a considerable problem for women, especially the poorest ones, and also because married women are the only ones entitled to obtain contraceptives through the public health sector. Moreover, as the authors observe, there are certain misconceptions and contradictions imposed by many providers regarding the age and parity limits on the provision of particular methods, which clearly affect their access and free choice, apart from excluding women and men of other ages. Another critical factor, and almost a universal complaint refers to women's concerns about contraceptive side effects that prevent them

from spacing their births, related to the unclear, imprecise information provided by health staff.

The authors suggest that in order to overcome these barriers and improve the quality of services, changes in policy and implementation of programs are needed at the central and local level, particularly those related to administrative procedures for achieving permanent, continuous access to health services, for dealing with emergency situations and reducing the barriers to the legal procedures for approving sterilization. Community advocacy to raise awareness of RH issues and providers' skills should be also addressed. In the research field, scientific and more solid data and analysis is needed to examine the interaction between users and providers and women's demands and expectations regarding the constellation of services provided, taking into account the diverse requirements for contraception and other services according to their life stages and health status.

One of the health and reproductive health aspects where unmet needs as regards both production of knowledge and programmatic interventions are extremely uncertain and alarming is induced abortion. The text by *Hoang Kim Dzung and Nguyen Quoc Anh (Chapter 10)* on induced abortion (IA) in Vietnam seeks to determine the factors that influence the decision to have an abortion and to provide information on the respective existing services. Although data are not handled very rigorously or in great depth, it is an interesting paper not only since it provides a broad picture of how this issue is expressed and dealt with in Vietnam but mainly since it raises many crucial research and policy questions that need to be urgently addressed in many countries where similar situations and high levels of IA occur nowadays, suggesting that there is a need in those countries to move beyond the narrow perspective of fertility reduction and provide a broader sexual and reproductive health focus.

Their study is based on survey data on induced abortions carried out in two provinces of the two regions with the highest IA rates, Northern Upland and the Red River Delta, where women aged 15-49 were interviewed, and complemented by evidence drawn from qualitative research – in-depth interviews of individuals and health providers, focus group discussions with unmarried youth and adolescents aged 15-22. The authors' findings showed that facts such as differences in education and occupation, parity, sex of living children, cultural values, gender and religion were all associated with the incidence of induced

abortion. Moreover, unmet needs for modern contraception, high rates of method failure, in particular IUD failure that seems to be linked to non-skilled or untrained staff, a limited range of contraceptives and/or health facilities' inability to provide alternatives in the event of side effects or to meet women's particular needs, are among the main factors characterizing the inadequated and limited reproductive health and FP services being offered that are closely linked to the high incidence of IA. A highly worrying issue is the very high proportion of all abortion cases take place without previously conducting a medical pregnancy test, a fact which could suggest the presence of non-intentional consequences of this policy related to poor quality health-care facilities, and the lack of proper regulations on this matter.

Unmarried youth and adolescents' views on IA described by the authors reflect common patterns obtained in most research findings related to FP interventions: lack of knowledge of contraceptive methods and how they are used, insufficient and inadequate sexual education programs within schools, uneasy, limited access to public health services for girls wishing to terminate their pregnancy, and social stigma, prejudice and discrimination for unmarried mothers and children born out of wedlock which drive women to seek confidential, private IA services. The authors provide some general recommendations based on the survey's findings, including the need to improve the quality of PF and IA services with a broader focus on reproductive health issues, taking into account the particular needs of different population groups such as unmarried and young people. Moreover, legal and policy reforms are also urgently needed to improve available conditions for safe procedures and avoid having abortions without being pregnant.

Based on findings from various studies conducted in India, *S. Siva Raju (Chapter 11)* describes the factors that have hindered health service use despite their availability in India, particularly in remote, less developed areas. The shortage or absence of drugs, the impersonal behavior of health staff, the limited time available for consultations, the long distances away of the clinics, the lack of confidence in doctor's treatment and the lack of privacy provided at the clinic, are among the main factors accounting for the poor image of government health centers among the people and staff at health services. A common situation in many underdeveloped contexts, mainly in the rural ones, that warrants consideration is the lack of attention or recognition of indigenous

medical practitioners from health officials as important health agents in improving health care at the community level. In addition, using data collected from the National Family Health Survey in India, for currently married couples having at least one child below 5 years old, the author offers some modest but relevant insights into the variations in the use of reproductive health services and their principal determinants in less and more developed areas (LDA and MDA), in three selected districts belonging to three contrasting States, Andhra Pradesh, Madhya Pradesh and Maharashtra. The results, centered on antenatal care, birth attendance, postnatal care and KAP on contraceptive methods, suggest that services were better in the MDAs than in the LDAs.

The author concludes by stressing the problem of designing and implementing homogeneous strategies for a country as a whole, specially in countries like India with enormous social and cultural inequalities, suggesting the need to redesign RH interventions by differentiating and stratifying the population by region, community and other significant variables. He also recommends the use of regional and cultural variations by health workers in order to target their efforts and the need to expand health service infrastructure and improve the ratio of doctors to patients according to area needs.

2.5. Policy and ideological implications

Exploring the implications of policy and ideology, their relation to poverty and to RH outcomes has been at the core of most international and national debates and agendas. The papers presented in this section aim to offer a better understanding of the contrasting influences of the various changing ideological, policy and legal forces on shaping and modifying RH initiatives and interventions among the most socially vulnerable population sectors. Issues of gender inequity, constraints on greater access to high quality RH services, and barriers to women and men's achieving free choice as well as their sexual and reproductive rights are crucial problems highlighted to fully comply with the RH approach. As has been widely acknowledged, policy and indeological implications are still one of the major underresearched areas where rigorous, grounded scientific debates and studies are urgently required, particularly in view of the growing strength of conservative right-wing positions all over the world that oppose the implementation of RH programs, and since the economic neoliberal

policies being implemented in poor countries continue to pose serious challenges on this field.

Addressing the changing political and ideological forces surrounding RH policies, programs and interventions in most underdeveloped countries, *Carlos Aramburú* (*Chapter 12*) discusses on how and why ideological and cultural values and beliefs have shaped and governed public policies in the reproductive and sexual health field in Peru. Considering the various political scenarios that have characterized the various attempts to institutionalize population policies in this country over the past 25 years, the author's analysis reveals the complexity and diversity of contrasting interests, objectives, ideological orientations, and programmatic strategies that have emerged from different social actors and have influenced and shaped the various vertical programs and actions implemented during this period. He clearly describes how increasing opposition from the Catholic Church and conservative right wing groups, have hindered and jeopardized reproductive health legal initiatives, such as allowing voluntary female sterilization as a contraceptive method, or legalizing abortion, echoing leftist arguments mixed with religious and ethical arguments to oppose contraceptive practices, and stressing the performance of coercive and authoritarian procedures; these procedures are an argument also stressed by feminist organizations and human rights groups. But more important, as the authors indicates, are the implications of the opposition forces that have led to changes in the programs and health providers' interventions, with adverse consequences for the poorest groups, creating a more restricted reproductive health policy characterized by the absence of transparency, participation and gender equity.

Within this panorama Aramburú also emphasizes the decisive influence of international hegemonic ideologies for shaping public policies at both the national and the international level, which in addition to the rising power and greater involvement of right-wing groups and fundamentalist movements, have sharply reduced or canceled their financial support of RH programs or some of their specific components, such as access to quality health services for legally authorized abortion, the promotion and use of emergency contraception and condoms, the exercise of reproductive and sexual rights, and free and informed reproductive choice. It is not difficult to foresee the potential harmful and negative impact of these actions at the national level of certain developing countries, particularly on the unprivileged and most

vulnerable groups, which depend mainly on public health services, where a reduction of public financing aid for programs and interventions in this field is evident. Moreover, as the author concludes, it is worrisome to observe that far from advancing reproductive and gender rights and universal access to high quality RH services they are clearly taking a step backwards. In view of the insufficient knowledge and understanding of the complex relationship between ideology, cultural values and RH and how it shapes policies and programs, as well as of the role played by civil society movements in this arena, he strongly suggests the need for more active involvement of social scientists in research and dissemination on these themes, given their relevance for policy design and interventions.

A highly debated topic related to current and future poverty conditions and social inequalities regarding access to reproductive health services is addressed by *Elsa Gómez (Chapter 13)* who discusses the actual and potential effects and implications of the Health Sector Policy Reform (HSPR) on gender equity in Latin America. Her analysis focusses on the relationships between health sector reforms, health situations and their determinants; access, utilization and financing of care; and the balance between contributions and rewards regarding health work, highlighting the disadvantages for women working within the formal and informal health system. The conceptual frame of reference in her paper seems quite clear and helpful, particularly as regards the distinction between equality and equity that is central to the rationale for the structural reforms implemented by the World Bank and the International Monetary Fund, which, while seeking to promote greater equity, are in fact creating more inequality. The increasing reliance on the free market to provide health care; the growing influence of international organizations in determining national policies and therefore health policies; cutbacks in public sector spending, the privatization of government functions, are key elements highlighted by the author that limit the ability of the State to ensure the protection of the most vulnerable population groups and enforce human rights.

Her paper offers a rich, complex analysis of four health reform policies frequently implemented in the Latin American region, stressing their implications for gender equity, which mainly result in an acute devaluation of women's productive and reproductive work and their exclusion from the formulation, design and resource allocation phases of these policies, despite the fact that they are more frequently active

participants in the implementation of community programs. The unequal impact of the interaction between the spheres of formal and informal provision of health care, among men and women, and of the distribution of the health care burden among family and community members, are additional implications that should not be neglected and need to be better understood and considered for improving the health of the society and thereby its RH conditions.

As part of her conclusions, Gómez highlights three main constraints on the achievement of gender equity goals in health sector reforms and reducing the unjust, avoidable and unnecessary disparities in health: a) the lack of adequate and specific information, in particular gender information, permitting the identification of both the effects of reform policies and of the groups most deeply affected; b) the preponderance of economic efficiency interests in the current health sector reforms and the absence of gender equity considerations in the debate and negotiations of these reforms; and, c) the lack of representation of the less privileged groups, including women, in power structures that define priorities and allocate public and private resources for health. More important, as she stressed, is the need to implement the principle of equity, mainly gender equity, so that instead of remaining at the level of rhetoric, it could be incorporated into a policy proposal and specific actions. Although Gómez' paper refers to Latin America, many, if not most, of the issues analyzed provide relevant insights for other underdeveloped regions, both with regard to the state of knowledge of this critical and underresearched topic, as well as the main challenges and strategies posed by incorporating a gender equity perspective into the health sector reforms, considering, obviously, the specificities of each region and country.

Turning to the results obtained from policy interventions on RH issues, the text by *Soledad González (Chapter 14)* offers a revealing analysis of the unmet needs and problems resulting from the review of the various evaluations carried out on the performance of Mexico's most important anti-poverty program (Progresa) which has a very marked, comprehensive reproductive health orientation and has focussed on the poorest rural and indigenous population groups. Although, as the author states, given Mexico's extreme inequality of income and health resource distribution, the program only served communities with preexistent health and education infrastructure, suggesting that it has excluded and therefore failed to benefit the most geographically and eco-

nomically marginalized Indian and rural communities. Considering the contradictory results obtained from quantitative and qualitative methodological approaches, the author centers her analysis on the perspective of health service providers as well as the point of view of the beneficiary population, particularly on the implications for social relations, specifically the gender relations of RH outcomes and interventions in this field. While findings from periodical institutional evaluations based on quantitative surveys show a reductionist vision of the problems related to the implementation of the Progresa's program, using qualitative approach and independent academic evaluations, a more comprehensive, realistic and critical scenario is given. Acces to health services, deficiencies in medical instruments and medicines and the lack of health personnel training are the greatest problems being identified under the institutional evaluation. Conflicts and divisions among the community, related to the criteria and procedure used to select families to be subsidized by the program; the apparent women's "voluntary" contributions and participation in the interventions defined by the program that conditioned their continued belonging to it; coercive practices regarding their reproductive rights to ensure continued aid from Progresa; an increased workload for women under the title of "empowerment" although traditional roles are preserved; and poor adaptation of the program to local culture and needs, are illustrations of the broader and main problems identified by women beneficiaries when using the qualitative approach. A more complex issue, is related to the meaning of "participation" by the different social actors, but mainly by the population being served where two contrasting rationales still prevailed: passive versus active intervention, the latter being the one that predominates among beneficiaries of the anti-poverty programs. An argument closely related to the prevailing tension between policy-public interests, objectives and interventions and those defined by the population according to their social and cultural values, lifestyles and needs.

Finally, the author provides useful suggestions for crucial issues and key actors that should be carefully considered, such as the expansion of the program to communities without access to schools and health clinics; the improvement of the quality of services and of income and working conditions for health personnel, including support for midwives, and a more integrated RH approach, including issues such as maternal mortality, domestic violence and HIV/AIDS preven-

tion. Moreover a gender equity perspective in the design and operation of the program is urgently needed to secure men's participation in health programs, eliminate women's compulsory workload, and guarantee reproductive rights, in particular with regard to coercive sterilization procedures. As in most of the other papers included in this book, a paradoxical central question stated by the author is the adverse effects of current neoliberal economic development policies that have led to the reduction of social expenditure and therefore health care expenditure and which instead of diminishing poverty continue to produce more vulnerable, poorer living conditions, particularly for women.

Dealing with another insufficiently researched area, namely the potential implications and consequences of legislation in the population field, *Elza Berquó and Suzana Cavenaghi (Chapter 15)* evaluate the impact that the 1997 law on sterilization in Brazil has had on the paid services offered by public health institutions regarding this procedure and on their reproductive rights. From their description of the context of sterilization prior to the passage of this law, the authors show the high national prevalence of married women who have been sterilized, a procedure usually performed using c-section deliveries, with enormous variations between regions, with the highest levels being found among the less developed ones and representing the most frequent practice of all contraceptive methods for many years. They also point out the higher proportion of sterilization among women in their early reproductive lives, as wells as among illiterate women or those with the lowest educational attainment, suggesting that this practice represents virtually the only access to contraceptive methods for the most vulnerable groups.

In an attempt to analyze the impact on sterilization of the new law, a follow-up survey with monthly structured interviews were carried out for six months after the initial contact among pregnant and non-pregnant women and among men who were applying for voluntary sterilization in two different types of public health facilities. The survey was undertaken in 2000 in six State capital cities in Brazil, with the highest prevalence rate of sterilization, at different stages in the implementation of the law in public health facilities. The main objectives were to determine the long-term outcome of the demand for sterilization, as well as the compliance with criteria stated in the law for current female and male sterilization practices, such as age and parity, the fulfillment of the two-month minimum waiting period between the

application for sterilization and its performance, the prohibition of tying the woman's tubes during delivery or abortion within 42 days following either procedure, a criterion established in the law with the objective of discouraging early sterilization and diminishing the high levels of c-section procedures. In addition, structured interviews were carried out with health professionals and RH program coordinators about their perceptions of these criteria. The authors note that the heterogeneous implementation of the new legislation by the different research health sites and the existence of more or less restricted health contexts for the performance of sterilization vary according to the incorrect and misleading interpretation of the law by professional staff, their disagreement with the criteria established and the lack of health facilities to respond to the high demand. Survey findings show the different profile that characterized both pregnant and non-pregnant women, as well as men, seeking sterilization, suggesting the prevalence of more disadvantageous conditions for non-pregnant women. Of particular interest is the authors' outcome about the lower use of safe sex after sterilization, where men rely more on their partners' fidelity than women on their partners' behavior, indicating the need for prevention programs because of the higher risk and greater vulnerability among sterilized individuals. Although changes in the legislation regarding the norms and criteria to regulate sterilization procedures are crucial to reducing abuses of this practice and to meeting men and women's health needs and their reproductive rights, the findings of the paper highlight some worrying aspects that restrict its enforcement, since female sterilization during c-sections continues to occur. These include the prevailing medical-institutional rationale for reducing the long established practice of female sterilization during c-section deliveries or abortions and the incomplete compliance with the main criteria established by the new legislation, In addition, they underline the existing social and cultural barriers involving the permanence of some gender asymmetry as regards sterilization practices, in which men's demands are more likely to be met and non-pregnant women experienced the greatest difficulty in implementing their reproductive decisions. As the authors state, there is still some ambiguity regarding compliance with legal regulations, which have led to the reduction of this abusive practice while also restricting the exercise of women's reproductive rights mainly as a result of the conservative reactions of health professionals, allied to the health bureaucracy and the failure to acknowledge

women's reproductive rights. This subject-line of research, which is also highly related to the quality of reproductive health services being offered, warrants further theoretical developments and empirical analysis of the institutional and individual sterilization rationale, circumstances and practices that have prevailed in many underdeveloped countries, particularly in comparison with the experiences of more developed countries, where the rate of female sterilization and c-sections is much lower. Within this comparative scenario, should sterilization in the former countries be regarded as a real, voluntary free choice for women or do women still opt for sterilization mostly because they lack effective contraceptive options, counseling services, and access to quality reproductive facilities? What other sorts of changes and interventions, apart from full compliance with legal ones, are needed to reduce both the abuse of sterilization and c-section procedures and to extend women's choices of safe contraceptive methods?

3. Final remarks

The papers in this book provide an overview of the various conceptual and methodological perspectives and the immense array of crucial and critical situations surrounding the relationships between RH, poverty, unmet needs and access to quality health services in underdeveloped countries. We hope that their findings and suggestions can lead to innovative and creative research agendas, which in turn will allow for a better definition, design and implementation of interventions in this area.

The conference from which these papers were drawn, attracted over 50 researchers from 27 different countries, mostly from Asia, Africa, Latin America and some from Oceania, Europe and the United States. We would like to thank them for their participation, and for their patience in incorporating the suggestions of the Ad Hoc Committee, comprising various researchers, to whom we are also grateful. We would particularly like to thank Philippe Collomb, for entrusting us with the scientific coordination of this seminar, as well as Hartati Ayral, for the secretarial support provided for over two years, without whom it would never have been completed. Special thanks are also due to Napaporn Chayanov, co-organizer of this seminar and the program, who, in conjunction with the team of assistants from the College of

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References

DAS GUPTA, Monica (1999), "Social exclusion and poverty: Preliminary thoughts for the World Development Report 2001", online: http:/www.dse.de/ef/poverty/dasgupta.htm.

DE HAAN, Arjan (1998), "Social exclusion: An alternative concept for the study of deptivation?", in: Arjan De Haan and Simon Maxwell, eds., *Poverty and Social Exclusion in North and South*, IDS Bulletin no. 29 (1), Institute of Development Studies, University of Sussex.

DIXON-MUELLER, Ruth, and A. GERMAIN (1992), "Stalking the elusive 'unmet need' for Family Planning"*, Studies in Family Planning,* vol. 23, no. 5, p. 330-335.

GORE, Charles, and Jose B. FIGUEIREDO (1997), *Social Exclusion and Anti-Poverty Strategies: A Project on the Patterns and Causes of Social Exclusion and the Design of Policies to Promote Integration. A Synthesis of Findings*, Geneva, International Labour Office.

LERNER, Susana, and André QUESNEL (2003), "Contextes, institutions et acteurs : Pour une approche multiple des relations entre conditions de vie et comportements reproductifs", in: M. E. Cosio-Zavala, ed., *Pauvreté, fécondité et planification familiale*, CICRED, Paris, p. 115-138.

LIPTON, M. (1983), *Demography and Poverty*, World Bank Staff Working Paper no. 623.

LIVI-BACCI, Massimo (1994), "Poverty and population", in: *Population and Development in the 1990s, The IUSSP Distinguished Lecture Series at ICPD, Cairo 1994,* IUSSP, Liège, p. 68-85.

MERRICK, Thomas W. (2002), "Population and poverty: New views and old controversy", *International Family Planning Perspectives*, vol. 28, no. 1.

OLIVEIRA, Maria Colleta, ed. (2001), *Demografía da exclusao social*, NEPO/UNICAMP, Sao Paulo.

ROBEY, B., J. ROSS and I. BHUSHAN (1996), "Meeting unmet need: New strategies", *Population Reports,* Series J, no. 43, Population Information Program, Johns Hopkins School of Public Health, Baltimore.

RODGERS, Gerry (1984), *Poverty and Population: Approaches and Evidence*, International Labour Organization, Geneva.

SCHOUMAKER, Bruno, and Dominique TABUTIN (2003), "Relations entre pauvreté et fécondité dans les pays du Sud. État des connaissances, méthodologie et illustrations", in: M. E. Cosio-Zavala, ed., *Pauvreté, fécondité et planification familiale*, CICRED, Paris, p. 63-114.

SEN, Amartya (1980), "Equality of what?", in: A. K. Sen, *Choice, Welfare and Measurement*, Blackwell, Oxford, p. 353-369.
SEN, Amartya (1992), *Inequality Reexamined*, Oxford, Oxford University Press.
SEN, Amartya (1997), "Social exclusion: A critical assessment of the concept and its relevance", paper prepared for the Asian Development Bank.
UNFPA (2004), *State of world population 2004. The Cairo Consensus at Ten: Population, Reproductive Health and Global Effort to End Poverty*, UNFPA, New York.
WORLD BANK (1996), *Poverty Reduction and the World Bank. Progresses and Challenges in the 1990s*, The World Bank, Washington D.C.
WORLD BANK (2001), *Attacking Poverty. World Development Report 2000/2001*, Oxford University Press, New York.

Part I

CONCEPTUAL AND METHODOLOGICAL ISSUES

1

PERFORMANCE OF ALTERNATIVE APPROACHES FOR IDENTIFYING THE RELATIVELY POOR AND LINKAGES TO REPRODUCTIVE HEALTH

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1. Introduction

Recent years have witnessed a growing interest in the assessment of economic status of households and the identification of the relatively poor in demographic/reproductive health research. This has largely emanated from an increasing emphasis on the powerful association of economic status (and of poverty) with demographic/reproductive health behavior and the increasing recognition of the need for formulating pro-poor development strategies to eliminate inequalities/disparities, especially in the context of sustainable development (United Nations, 1994). Paralleling this process has been the conceptualization of poverty as a multidimensional phenomenon, encompassing economic status as well as cultural, political, and ideological dimensions, the media within which poverty is rooted and reproduced. Although poverty is now embedded in a wider context and not merely as the lack

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of capacity to meet basic needs, the economic status of households is still a desirable analytical tool in research, at least as a variable that can be used in conjunction with other poverty-related attributes.

However, the measurement of economic status and wealth and the identification of the relatively poor remain as major challenges in demographic/reproductive health research. Concurrence is absent on robust and powerful indicators of economic status that can be constructed with data collected in sample surveys. Typically, in both descriptive and analytical studies that use survey data, demographic/reproductive health behavior is associated with such characteristics as the education of women (and men, but more often with that of women), urban-rural residence, occupation, ethnicity, religion and other sociocultural or socioeconomic variables. Multivariate analysis/predictive models often lack independent variables that signify the economic status of households, or at best, tend to use proxy indicators. This is particularly true for research in developing countries, where the sole information sources for analyzing the determinants of demographic/reproductive health behavior are cross-sectional, single-round demographic and reproductive health surveys, such as the Demographic and Health Surveys (DHS) and the Reproductive Health Surveys (RHS), which, in turn, do not provide any direct information on economic status. It is also often the case that in such countries, well-formulated and official or semi-official taxonomies of economic status and/or social strata do not exist. In short, despite the general recognition that economic factors have an indispensable explanatory power in regard to most reproductive health behavior, practical and theoretical problems preclude the collection of information on economic status in demographic sample surveys.

The orthodoxy in estimating the economic status of households is to collect information on income, or more preferably on consumption expenditures, usually by using data collection strategies other than single-round surveys (Diamond *et al.*, 2001). Questionnaire modules used for collecting data on consumption expenditures, even if adapted for inclusion into single-round demographic surveys, are lengthy and require, in addition to cash expenditures, the collection of information on expenditure items such as social transfers, subventions, exemptions, in kind payments, inter-household transfers, and home production of food, which are clearly difficult to recover accurate information on. Moreover, such lengthy questionnaire modules are often considered as

an extra burden on respondents, already under pressure to respond to a voluminous amount of questions on reproductive health and demographic histories, like those in the DHS questionnaire modules. Not surprisingly, very few demographic and reproductive health surveys collect detailed information on household expenditures, and in most countries, the collection of such information is often confined to the Living Standard Measurement Surveys (LSMS) or Household Budget Surveys (HBS)[2]. Such surveys, in turn, provide little, if any information on demographic/reproductive health behavior[3].

In the absence of information on consumption expenditures and/or income from demographic and reproductive health surveys, researchers often tend to collect and use proxy information on economic status, usually in the form of ownership of household assets, land ownership, dwelling characteristics and the like. Such information is utilized in a variety of ways to construct indicators of economic status, most often in the form of indexes constructed by using information on ownership of household assets. These indexes typically do not refer to current income or consumption, or to absolute poverty, and can only be regarded as measures of relative wealth or economic status focusing on households' or individuals' position within the overall distribution.

Among the asset-based approaches to the assessment of the economic status of households, the simplest is perhaps the assignment of equal weights to all household assets. A household scores one point upon the ownership of an asset, and no points if the household does not possess the asset in question. The aggregated asset score is then taken as an indication of the household's economic status. This approach is further discussed (and indeed utilized) in the following sections. Another approach is to impose a set of weights to the household assets in question, often by estimating their average prices; an approach

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2. For reviews of the methodologies and contents of these surveys, see Grosh and Glewwe (2000) and Grosh and Munoz (1996).

3. A major conceptual problem would remain unsolved even if such information were collected simultaneously, due to the lack of proper correspondence of the relevant time frames. Consumption expenditures largely reflect current economic status of households, whereas current demographic/reproductive behavior of household members is shaped over a course of time, during which economic status of the household may have varied considerably. There would clearly be a problem of synchronicity between current economic status and demographic/reproductive behavior, which cannot be dissociated from past demographic/reproductive experiences.

that necessitates extra work and the use of a considerable amount of external information, intrinsically prone to a multiplicity of errors[4]. A third option is to regress all assets as separate factors on the dependent variable of interest, say, on a key indicator of early childhood mortality. The resulting regression coefficients for each of the assets can be considered as the "weights" of the assets, and the set of weights as forming an index of economic status (Montgomery *et al.*, 1999). However, since

> "…many assets play a both direct and indirect effect on outcomes […], there is no way to infer from the unconstrained coefficients on the asset variables from a multivariate regression analysis the impact of an increase in wealth" (Filmer and Pritchett, 1998).

A relatively recent effort in this area has been the formulation of an "asset index" by Filmer and Pritchett (1998), which appears to have found significant support in the research community. The Filmer and Pritchett Asset Index, as described in more detail below, is based on using principal components analysis to derive weights for household assets, which are then used to construct a weighted aggregate index, and consequently, to classify households (or survey populations) into quintiles of "wealth"[5].

The present paper poses a simple question in relation to the Filmer-Pritchett approach and proceeds from there: Does using a sophisticated statistical analysis tool lead to the production of a more powerful (proxy) indicator of economic status/wealth? Compared with other approaches that use more or less the same information but do not utilize sophisticated statistical techniques, does the Filmer-Pritchett approach produce a proxy index of economic status that better explains

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4. Information on the prices of household assets can be estimated by using different ways. These would include asking the costs of assets to the respondents, or using average prices of each asset from official sources. In any case, the accuracy of the estimates is likely to be questionable. The information collected is often below par due to recall problems. Furthermore, the existence of inflation may distort the comparability of prices of household assets which may have been acquired over a considerable time span. There are also problems in connection with the use of "average" prices: it may be that a specific household asset will have a wide range of prices depending on the brand. Also, the "prices" of some assets or housing characteristics may be very difficult to estimate: consider estimating the average price of a flush toilet, for instance.

5. The Filmer and Pritchett Asset Index appears to be named with a variety of terms: the Wealth Index, the Asset Index, the Standard of Living Index, etc.

differentials in demographic/reproductive health behavior? In short, is it worth the effort to use principal components analysis, which probably alienates the less statistically minded researcher or the potential non-technical reader by relying on an abstract set of weights for household assets? Or, is it possible to obtain similar results by using other, simpler approaches?

2. Data

Analyses in this paper were carried out with data of the Turkey Demographic and Health Survey (TDHS), conducted in 1998 as part of the international Demographic and Health Surveys (DHS) program (HUIPS and Measure DHS+, 1999). The TDHS mainly used methodologies and survey instruments designed by the DHS, although some modifications were introduced to adapt the survey to local needs[6]. The TDHS used a multistage, stratified cluster sampling approach, representative of the country.

The TDHS collected information via a number of survey instruments. The household questionnaire included a household roster and collected information on housing characteristics and ownership of durable goods. Information collected via the household questionnaire is used in this paper to construct the indexes of economic status. The TDHS also collected information from all women aged 15-49 regarding their reproductive experiences and demographic behavior, by using women's questionnaires. A wealth of information was collected on reproductive health via these questionnaires, some of which are used in this paper. Additionally, the TDHS collected information from a subset of husbands of interviewed women. Finally, anthropometric measurements of women and children were undertaken to assess their nutritional status.

The TDHS collected information from 8,059 households, 8,576 women aged 15-49, and 1,971 husbands. No effort was made to collect information on consumption expenditures or income, with the excep-

6. Detailed information on the methodology of the TDHS and the DHS can be found in HUIPS and Measure DHS+ (1999).

tion of a small number of questions that were asked to estimate the amount of cash income of the household[7].

3. Indexing household economic status

3.1. The Asset Count Index (ACI)

The most commonly used and simplest asset-based index for assessing the economic status of households can be named as the Asset Count Index (ACI), which is based on a simple count of the number of assets owned by households. In other words, rather than assigning weights to each household asset on the basis of an "objective" or statistically determined criterion, each household asset is assigned an equal weight (see Wang, 2002, or Gage *et al.*, 1996, for instance). This approach is simple and easy-to-use, yet its main shortcoming lies in its simplicity, in particular, the assignment of equal weights to household assets. For instance, Gage *et al.* (1996) use this approach to construct an index which ranges from 0 to 6, based on scores of 1 for each of the 6 items potentially present in the household, namely 1) some toilet facility, 2) piped drinking water, 3) electricity, 4) non-mud floor, 5) radio, and 6) motorcycle or car. Households are then categorized into groups of low, medium and high socioeconomic status based on their index values, respectively 0-1, 2-3, and 4-6.

By allocating equal weights to each household asset, the ACI fails to take into account the varying ease with which a household can acquire the assets in question. By owning a car, which might be a relatively expensive investment, a household is effectively assigned the same score with having a radio, which might be widespread and easily accessible with little cost to individual households. A household that

7. Acknowledging the difficulty of collecting comprehensive information on income or consumption expenditures with a small number of questions that would be tolerated into the questionnaires, the TDHS aimed at classifying households in terms of their cash income brackets. Cash income was not asked directly to the respondents. First, respondents were required to state whether their income was below a certain amount; if not, they were asked if their income was above a certain amount. By asking a chain of such questions, the information obtained allowed the placement of the household in an income bracket during the analysis stage. These questions were largely experimental, seeking to answer whether such information would be correlated with information on household assets, and whether such information would enhance the performance of multivariate analyses. Some analyses of this information were performed, but all remain unpublished to date.

has all assets but a car scores the index value of 5, as does a household which owns a car and other assets, but does not own a radio. In this case, index scores are equal although it is clear that to own a car would require incomparably larger economic resources than to own a radio. Nevertheless, even with such flaws, the ACI is commonly used by researchers who refrain from constructing more sophisticated indexes for one reason or another.

3.2. The Filmer and Pritchett Asset Index (FPAI)

Recently, an asset-based index which uses weights for household assets was proposed by Filmer and Pritchett (1998; 1999). For the construction of a weighted index of household assets and housing characteristics as a proxy indicator of economic status/wealth, Filmer and Pritchett (1998) make use of two sets of variables typically found in demographic survey data. The first set includes variables on the ownership of various household assets, such as television, refrigerator, bicycle and the like. The second set includes variables on housing characteristics, such as presence of electricity, source of drinking water, and floor material. An index constructed from these variables is then used to rank households or survey population by their economic status/ wealth[8].

For the construction of the FPAI, each household asset is assigned a weight or factor score generated through principal components analysis. Principal components analysis extracts from a large number of variables those few orthogonal linear combinations of the variables that best capture the common information. The first principal component produces a linear index of the underlying variables[9]. Con-

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8. In the first applications of the method, Filmer and Pritchett estimated standardized scores of economic status for households and subsequently ranked households into "wealth quintiles" without any reference to the survey population. In this variant of the method, each household member is assigned an asset index score which has been calculated by assuming equal weights for households. In later applications, however, the calculation of standardized scores is carried out on the basis of households, but consequently, survey populations, rather than households are categorized into wealth quintiles. This can be achieved by weighting households by the number of household members and estimating the quintile cut-off points on the basis of the survey population.

9. Filmer and Pritchett (1998) argue that the "factor" which explains the largest amount of "co-movement" of different assets can be interpreted as a household's

sequently, each household is assigned an index value of "wealth", whose mean is normalized to zero by the principal components procedure. The standardized index values of households are then weighted by the number of household members and are subsequently used to create break points that define wealth quintiles, ranging from the poorest (survey population scoring the bottom 20% of the index values) to the richest (top 20% scoring households).

The FPAI is an attractive way of producing a proxy indicator of economic status/wealth from a number of respects. It has appeared to be a good proxy, performing well, if not better than consumption expenditures, in explaining differentials in educational attainment and enrolment and a variety of other indicators (Filmer and Pritchett, 1998; Montgomery *et al.*, 1999). It is considered to refer to long-run wealth, rather than to current economic conditions, which means that it is well suited for use in conjunction with social behavior, which is also determined in the long-run. The Filmer-Pritchett procedure produces standardized index scores, which can easily be used in multivariate analyses as a continuous variable. By dividing households into quintiles, the relatively poor can be identified, by taking the population in households with the lowest 20 or 40% of index values – in other words, the population in the first quintile or in the first two quintiles. Finally, the index can be constructed by using a relatively small number of variables[10], often included in field surveys in any case.

The index has gained considerable popularity during the last few years[11], perhaps at least partly due to the institutional support it re-

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economic status, i.e. the first principal component. They recognize a generic problem with the principal components procedure, though: the difficulty in explaining second and higher order components. In trials of the index with various country data, the first eigen values are relatively high, but so are the eigen values of the second and sometimes the third component. Although such results imply that the "co-movement" of the assets is explained by more than one factor, Filmer and Pritchett still suggest the use of the first principal component for deriving weights for household assets.

10. Although the FPAI can be constructed by using information on a small set of household assets, it has also been shown that increasing the number of household assets enhances the performance of the index and increases the variability of index scores across households (Johnson, 2001).

11. The sudden gain of popularity of the Filmer-Pritchett index is somewhat surprising and is probably a reflection of the desperation of researchers to come up with analyses to link demographic/reproductive health and economic status, particu-

ceived. For instance, the World Bank teamed up with experts from the international DHS project to perform analyses on DHS data from various countries, attempting to show the relationship of economic status, determined by using the Filmer-Pritchett approach, with reproductive health, demographic behavior and other characteristics included in DHS data. Currently, results for 44 countries are available (World Bank, 2002; Rutstein, 2002), including Turkey (Gwatkin *et al.*, 2000) but based on the results of the 1993 TDHS. Second, the Multiple Indicator Cluster Survey (MICS) project, conducted in 2000, advocated the use of the index[12]. The objective of the worldwide MICS project was to conduct field surveys in developing countries to fill in data gaps in the area of child rights for survival, health, protection, etc., through the collection of information on such indicators as infant and child mortality, child morbidity, education, preschool development, immunization, diarrhea, and orphanhood. Countries carrying out the MICS were advocated by UNICEF, the sponsors of the project, to collect information on a variety of household assets[13], so that the FPAI could be calculated and the linkages between poverty and child rights could be assessed, albeit in the descriptive country reports (UNICEF, 2002). In addition to these major efforts, the Filmer-Pritchett index has now been used in numerous studies by researchers from around the world (El Khoury and Panizza, 2001; El-Kogali and Suliman, 2001; Wagstaff and Yazbeck, 2001).

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larly poverty. Macro International Inc. is now using the index to produce information sheets for DHS showing differences in health, nutrition and population outcomes by wealth quintiles in different countries, and the World Bank is using the index to monitor socioeconomic programs and reforms in the health sector. The adoption of the index as a major monitoring tool is somewhat unexpected and possibly too courageous, given its indirect nature and a variety of criticisms directed towards it. For these criticisms, see the main text.

12. Interestingly, UNICEF refers to the FPAI as the "DHS Wealth Measure". The index was developed to measure intra-country economic status from data of any household survey, but the obvious primary target for performing analysis with the index was the DHS surveys. Most applications of the index indeed use DHS data. The collaboration between the World Bank and the DHS project must have led UNICEF to name the index as such.

13. UNICEF (2002) suggests the use of information on the following assets for the construction of the FPAI: main material of dwelling floor, number of rooms in the dwelling, main source of drinking water, toilet facility used, possession of electricity, radio, television and refrigerator, ownership of bicycle, motorcycle and car, and main cooking fuel used by the household.

Despite the sudden popularity of the index, there are also studies that have pointed out its various shortcomings. For economists, who are accustomed to using measures of absolute poverty or economic status (in the form of poverty head-count ratios, for instance), the measure is unconventional and is of limited use in various situations. One major criticism of the index is the impossibility of using it for comparative purposes across populations or over a period of time, which applies to all asset-based (and other) proxies or measurements of economic status that effectively measure relative, rather than absolute economic status/poverty (Ferguson *et al.*, 2002). However, there are some recent efforts to modify the index so that comparability across countries is ascertained, by using a common set of assets for all countries (Johnson, 2001). Another major objection to the index is based on the observation that the tendency to acquire an asset differs among households from different cultural backgrounds (Ferguson *et al.*, 2002), which means that the index actually measures other dimensions of variation in addition to wealth and is effectively incomparable across households.

3.3. The Asset Prevalence Index (API)

The Asset Prevalence Index (API) was first developed in the mid-1990s (Hancioglu, 1995) but has been used very little in research[14] with the exception of one study which used a preliminary version (Tuncbilek *et al.*, 1996). The index is constructed by using population-level data on the possession and presence of various household assets and housing characteristics and assigning component scores to households based on the abundance (prevalence) or rarity of each asset/characteristic in the general population.

The API is based on the observation (and assumption) that a household's wealth is positively correlated with its ownership of household assets that are not easily accessible by the majority of households in the general population. In other words, the cost of an

14. One study by Kalaycioglu *et al.* (1997) appears to use information on household assets in a somewhat similar fashion, but only as part of a broader index of "socioeconomic stratification". Even in this case, the information on the prevalence of ownership of household durable consumer goods is used in conjunction with the average market prices of the durables in question. The authors do not specify whether this approach was adopted from another study, or whether it was their own design.

asset is inversely correlated with its abundance, at least roughly – the more expensive an asset, the rarer it would be expected to be present in households. In short, those households with high economic status would have more access to expensive (and rare) assets than those with low economic status, while an inexpensive asset would be accessible by the majority of households.

Calculation of the API, based on this simple logic, is straightforward. First, a number of household assets are selected for the construction of the index, including durable consumer goods and housing characteristics. The abundance of each asset in the general population is then determined by running simple frequency distributions. The percentage of population in households without a specified household asset is then used as the weight of the asset in the index. In other words, if, in the general population, 95% of households own a television, a household which owns a television obtains a component score of 5. If 34% of the general population own a car, then an individual household which owns a car obtains 66 component points. In this scoring procedure, a household which owns a common asset obtains a low score from that asset, while a household which owns a household asset rarely found in households obtains a high score. The index value is calculated by summing the component scores that a household has received from each asset. A high index value is therefore indicative of high economic status. A household which does not own any of the assets scores zero. For reasons of comparability with the other indexes, the API scores are also standardized into z scores with a mean of zero and standard deviation of 1. The API, like the FPAI, produces a continuous variable that can be used in multivariate analysis, and as with the FPAI, households are categorized into quintiles of wealth based on their standardized index scores.

An inherent problem of the API is that the logic behind its construction may not hold true for some consumer goods or housing characteristics. In Turkey, for example, some household assets, like refrigerators, have become the norm: the absence of a refrigerator in a household can safely be attributed to the lack of economic competence of the household to buy it. This probably holds true for most households not owning a refrigerator. Such assets are found commonly in households, and a household that owns such an asset obtains a low component score from this item in the API. The problem is that the absence of some other household assets cannot be solely attributed to

the lack of economic competence to acquire them. Ownership of certain household assets may be very strongly correlated with their local availability, with the exposure of the household to information on the asset in question, or simply with taste, rather than the cost of the household asset and hence the economic potency of the household. A household may well be capable, in terms of purchasing power, to buy a car, but may not choose to buy an inexpensive item such as a camera, simply because the good in question is irrelevant to the tastes of household members. Households secluded in remote areas, for instance, may not be aware of the existence of or in need of relatively new innovations like computers or dishwashers – ownership of such assets is therefore a matter of informed choice and not necessarily of economic potency. Further still, some households may actually prefer not to have a flush toilet in the house and prefer a closed pit outside the house, purely for cultural reasons. Despite these conceptual problems, a household that owns a rare asset as a camera obtains a high API score, while a household that owns a car (assuming that cars are more common than cameras) obtains a lower API score: ownership of a camera increases the API score by a larger margin than does the ownership of a car.

It is possible, of course, to construct the API on the basis of only those housing characteristics or household assets which can be safely assumed to be desirable by most households, the desire being relatively autonomous from taste, informed choice, or local availability[15]. However, trials with the API have shown that the inclusion of all household assets, as opposed to the inclusion of a basic set, enhances the performance of the index. From a practical point of view, the use of a larger number of assets increases the variation across households. Nevertheless, two variants of the API were constructed in this study: the first variant with the inclusion of a large set of assets and characteristics, including those whose ownership may be choice-related, and second, by utilizing only those assets or characteristics considered to be desirable by the overwhelming majority of households.

15. This is probably true for all asset-based indexes, including the FPAI.

4. Household assets

Information on the possession of 17 household assets from the TDHS were used to construct the indexes. Thirteen items relate to the possession of durable consumer goods; four items refer to the presence of specific housing characteristics. Proportions of population in possession of these assets in their households range from 3.6% (proportion of population in households with a computer) to 92.9% (proportion of population in households with a refrigerator) (Table 1).

Table 1
Ownership/presence of household assets and housing characteristics, survey population, urban and rural areas, Turkey, 1998

Percent of survey population in households with:	National	Urban	Rural
Television	92.8	96.0	87.1
Refrigerator	92.9	96.6	86.4
Car	26.2	29.0	21.5
Telephone	77.7	81.7	70.8
Oven	65.7	76.1	47.9
Dishwasher	13.5	19.8	2.7
Washing machine	60.5	74.7	36.0
Vacuum cleaner	61.7	75.9	37.4
Video player/recorder	10.1	13.8	3.7
Camera	33.3	40.5	20.9
CD player/music set	13.5	18.7	4.7
Mobile telephone	12.6	17.6	3.9
Computer	3.6	5.4	0.4
Piped water/bottled water	67.4	89.2	29.7
Private flush toilet	62.8	86.3	22.2
Finished floor material	74.8	83.9	59.2
Heating with central or private radiator	9.3	14.2	0.8
Number of observations (unweighted)	37,991	24,367	13,624

There are profound urban-rural disparities in terms of ownership/presence of the selected household assets in Turkey, which also provide some hints as to the possession of which assets are choice-related. For instance, dishwashers, video players, CD players, mobile tele-

phones and computers have very low proportions in rural areas, and are probably lesser-known goods for much of the rural population. It happens to be the case that these durable goods are newer innovations, compared to other goods which have higher proportions. On the other hand, some rural households would typically be unable to use bottled water or equip the dwelling with central heating even if they desired, simply because bottled water is not marketed in some rural areas and central heating systems are only applicable if dwellings are multi-story buildings, which is generally not the case for the overwhelming majority of rural dwellings.

5. Results and comparisons of index scores

5.1. The ACI

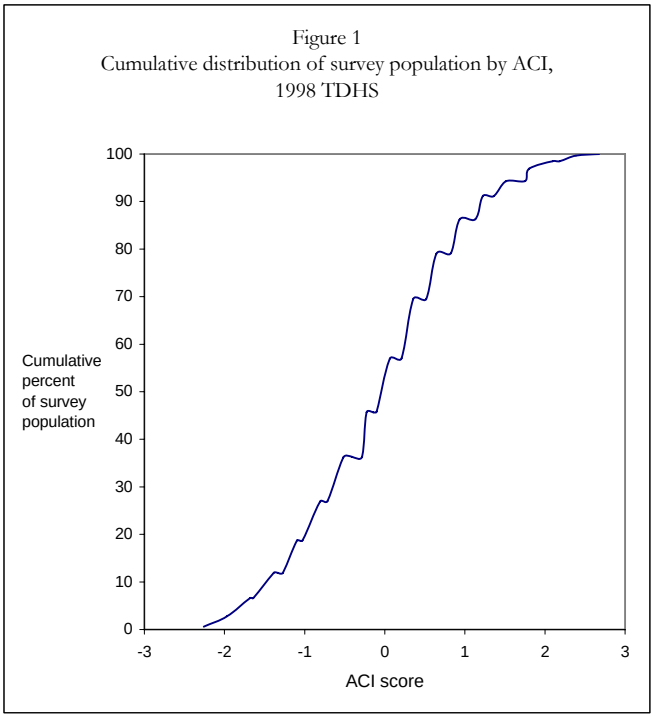
All 17 household assets were used for the construction of the ACI. To circumvent the problem of missing information on some household assets, the ACI was calculated as a proportion rather than a simple count: a household which had ownership information on all 17 assets and owned 11 of them was assigned an initial ACI score of 0.647, while a household which had ownership information on 15 household assets, had missing information on the two remaining assets, and owned 9 household assets was assigned an initial ACI score of 0.6[16]. ACI scores ranged from 0.0 (households which owned none of the assets) to 1.0 (households which owned all of the assets). The procedure produced only 34 distinct ACI values[17], which were transformed into standardized z scores with a mean of 0 and standard deviation of 1.

16. Households which had missing information on more than half of the assets were assigned missing values for the ACI.

17. If there were no missing information on any of the assets, 18 different values would have been obtained, ranging from 0 to 17. Usually, studies using the asset count index do not mention the problem of missing information (Gage *et al.*, 1996; Wang, 2002). In fact, taking the missing information into consideration and calculating the API as a proportion rather than a simple count has two positive effects on the resulting index scores: 1) A larger number of index scores are obtained, thus providing a wider range of index values, 2) A downward bias in the index scores of households with missing information on some assets is eliminated.

Some 81.3% of the survey population owned at least a quarter of the household assets, 43.1% owned at least one half of the assets, and approximately 8.9% of households owned at least three quarters of the household assets. These proportions are only approximate, since the number of distinct index values is rather low. This is clearly observed in Figure 1 with the seesaw pattern of the index values by the cumulated survey population.

Figure 1
Cumulative distribution of survey population by ACI, 1998 TDHS

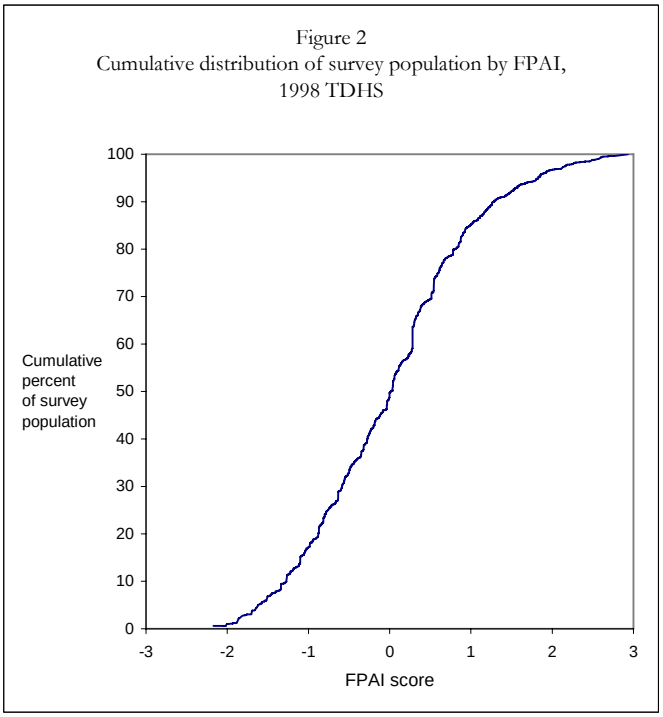


5.2. The FPAI

The FPAI was also constructed by using information on the ownership/presence of all 17 household assets. The first principal component had an eigen value of 4.682 and explained 27.5% of the total variance. This is a relatively high figure, compared to an analysis performed on the data of 35 countries, where the variance explained by the first principal component ranged between 18.6% and 30.9% (Filmer and Pritchett, 1999). However, as in the other applications of the

FPAI, the second and third principal components also had eigen values above 1 (1.739 and 1.250 respectively), which is usually taken as the cut-off point for the determination of the number of underlying factors in principal components analysis. However, in line with the recommendations of Filmer and Pritchett, the "weights" of the assets were based on the component scores extracted with the first principal component. 1,552 distinct FPAI scores were obtained as a result. Figure 2 shows that a relatively smooth cumulative distribution of the FPAI was obtained.

Figure 2
Cumulative distribution of survey population by FPAI, 1998 TDHS



5.3. *The API*

The third approach that was used to construct a proxy index of economic status was the Asset Prevalence Index. Two variants of the index were calculated. The first variant, designated as API-1, used in-

formation on the possession of all 17 assets. The second variant (API-2), a reduced version of the API, excluded durable consumer goods/ housing characteristics owned by/present in the households of less than 20% of the survey population. The 20% cut-off point was assumed to be sufficient in reflecting that the ownership/presence of the asset is correlated with consumer taste (for instance, video players and cameras), local availability (heating with private or central radiator), or informed choice (for instance, dishwasher)[18]. API-2 was constructed with 11 variables.

In accordance with the prevalence of household assets in Turkey, the maximum score that a household obtained on the basis of any asset was 96.4 points, in the case of possession of a computer, a rarely found asset in Turkish households. Ownership of a refrigerator generated only 7.1 points, because refrigerators are commonly found in Turkish households. A household which owned/had all of the household assets initially scored 921.6 points, in the case of API-1. In the calculation of API-2, a household which possessed all 11 household assets scored the maximum 384.2 points (Table 2). The API-1 and API-2 scores were

Table 2
Ownership/presence of household assets and housing characteristics, and weights of household assets in the asset prevalence indexes, Turkey, 1998

Percent of survey population in households with:	Percent	Weight of asset	
		in the API-1	in the API-2
Television	92.8	7.2	7.2
Refrigerator	92.9	7.1	7.1
Car	26.2	73.8	73.8
Telephone	77.7	22.3	22.3
Oven	65.7	34.3	34.3
Dishwasher	13.5	86.5	-
Washing machine	60.5	39.5	39.5
Vacuum cleaner	61.7	38.3	38.3
Video player/recorder	10.1	89.9	-
Camera	33.3	66.7	66.7
CD player/music set	13.5	86.5	-
Mobile telephone	12.6	87.4	-

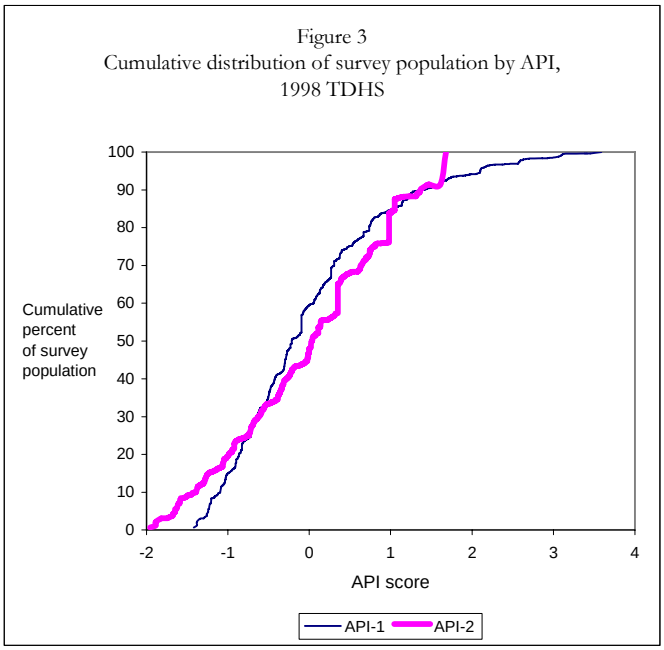
18. The 20% cut-off point also corresponds to a quintile, used to classify the survey population.

Computer	3.6	96.4	-
Piped water/bottled water	67.4	32.6	32.6
Private flush toilet	62.8	37.2	37.2
Finished floor material	74.8	25.2	25.2
Heating with central or private radiator	9.3	90.7	-
Total (maximum index scores)		921.6	384.2

Source: 1998 Turkey Demographic and Health Survey.

also standardized into z scores. Quite expectedly, the API-1 produced a wider range of values (1,275 distinct values) and a more smooth distribution was obtained compared to API-2, which had a narrower range (572 distinct values) and exhibited seesaw patterns (Figure 3).

Figure 3
Cumulative distribution of survey population by API, 1998 TDHS

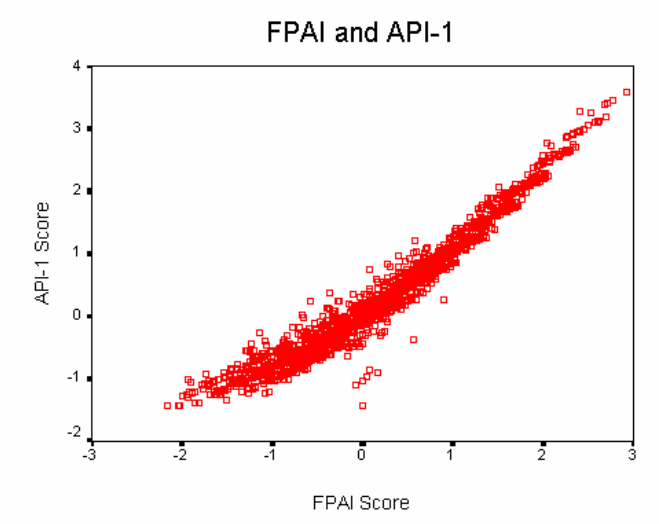


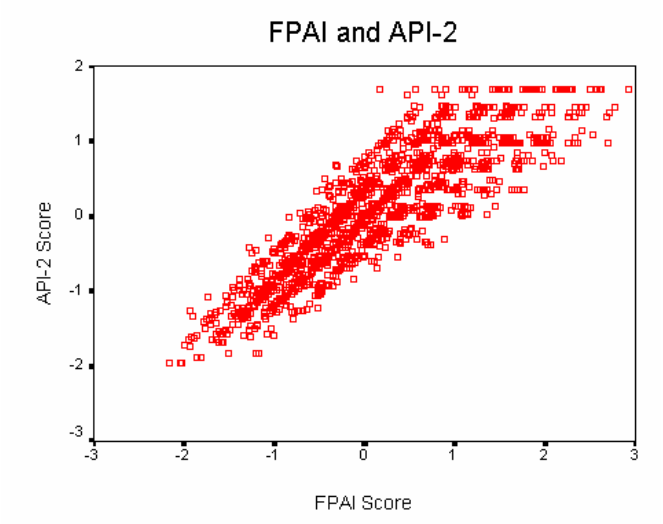
5.4. *Comparing standardized z scores of indexes*

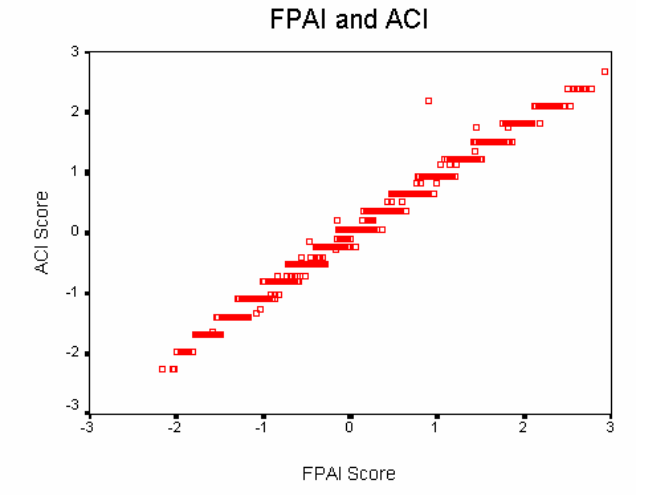
Comparing index values across indexes reveals the presence of strong correlations between them. It is apparent, however, that whenever API-2 is involved in the comparison, the relationship is weaker. Clearly, the API-2 does not approximate values obtained by the FPAI

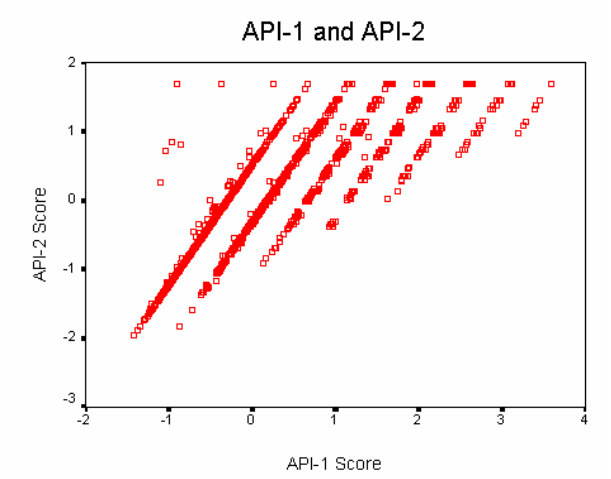
(Figure 4, second panel). On the other hand, a strong curvilinear relationship between the FPAI and the API-1 is observed. A quite interesting result is the strong linear relationship between the FPAI scores and the ACI scores: the very need for devising indexes that assign weights to household assets rather than treating them with equal weights has in part been triggered by the "apparent shortcomings" of the ACI.

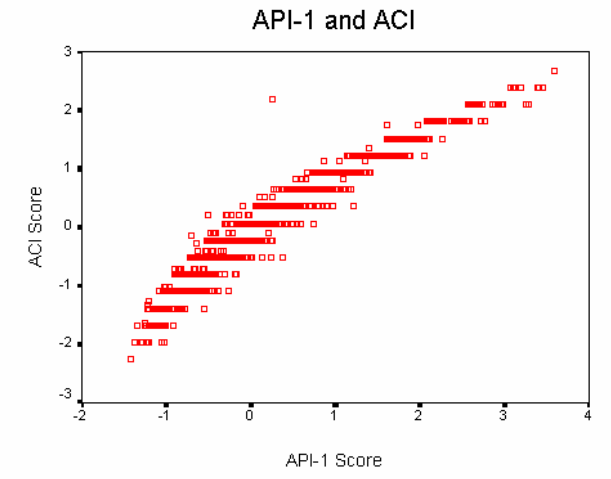
Figure 4
Scatter plots between standardized values of the Filmer-Pritchett Asset Index, the Asset Prevalence Index, and the Asset Count Index, Turkey, 1998

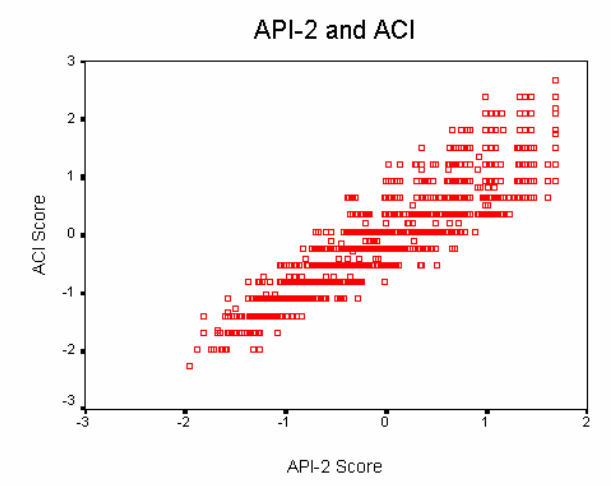



FPAI and API-2
API-2 Score
FPAI Score
2
1
0
-1
-2
-3


FPAI and ACI
ACI Score
FPAI Score
3
2
1
0
-1
-2
-3


API-1 and API-2
API-2 Score
API-1 Score
2
1
0
-1
-2
-3
-2
-1
0
1
2
3
4


API-1 and ACI
ACI Score
API-1 Score
3
2
1
0
-1
-2
-3
-2
-1
0
1
2
3
4



These results provide only visual evidence on the relationship between the indexes and are in no way conclusive, but they provide the first hints that both the API-1 and ACI, constructed by using simple logic, are likely to perform almost as well as the FPAI, despite the fact that sophisticated statistical techniques were not used in their construction.

6. Quintiles of economic status

As indicated earlier, Filmer and Pritchett (1998; 1999) propose the division of the survey population into quintiles of economic status, on the basis of index scores assigned to households or the survey population. The same procedure can also be applied to the other indexes, thereby producing a comparable taxonomy of economic status. By dividing the survey population into quintiles, one can hopefully isolate those households which lie at the bottom of the "wealth ladder", in the first quintile, which are identified as those in relative poverty on the basis of the index values.

Comparing the allocation of the survey population into quintiles of economic status across the four different indexing approaches confirms the broad interpretations based on the figures in Figure 4. The first three panels in Table 3 are of specific importance: These tables

show the degree of correspondence of the quintiles obtained by the Filmer-Pritchett approach with those obtained by other indexes. In all three tables, the proportions that show correspondence between the indexes (proportions along the left-to-right diagonals) take a U-shape, indicating higher degrees of correspondence for the first and last quintiles. In other words, the three indexes approximate the Filmer-Pritchett taxonomy to a greater degree in the "poorest" and "richest" categories, by over 90%, with the exception of the richest quintile in the case of API-2. In regard to the identification of those in relative poverty, API-1, API-2 and ACI correctly identify more than 90% of those indicated by the Filmer-Pritchett approach. API-1 and ACI identify correctly about 95% of those identified as relatively rich households by the FPAI. The least convincing correspondence of the three indexes between the FPAI appears to be in the case of API-2. For instance, only 52.1% of those allocated into the fourth quintile by the FPAI are also classified into the same quintile by the API-2.

Regarding comparisons between quintiles produced by the ACI, API-1 and API-2, the best correspondence appears to be between API-1 and ACI for the higher quintiles, and between the API-1 and API-2 for the lower quintiles, i.e. those in relative poverty. The latter is not surprising since API-2 is constructed as a subset of API-1.

Table 3
Correspondence between economic status quintiles
constructed by the Filmer-Pritchett Index, the Asset Prevalence Index
and the Asset Count Index, Turkey, 1998

		API-1 quintiles					n
		Poorest	Second	Middle	Fourth	Richest	
FPAI	Poorest	90.5	9.3	0.2	-	-	7,347
quintiles	Second	8.6	78.6	12.3	0.5	-	7,347
	Middle	0.9	12.0	69.3	17.7	0.1	7,342
	Fourth	-	-	18.3	77.0	4.7	7,344
	Richest	-	-	-	4.8	95.2	7,357
Total		20.0	20.0	20.0	20.0	20.0	36,738
		API-2 quintiles					n
		Poorest	Second	Middle	Fourth	Richest	
FPAI	Poorest	90.4	9.6	-	-	-	7,347
quintiles	Second	9.6	77.8	11.8	0.7	-	7,347
	Middle	-	11.6	65.9	21.5	1.0	7,342
	Fourth	-	0.9	17.5	52.1	29.5	7,344
	Richest	-	0.1	4.8	25.6	69.5	7,357
Total		20.0	20.0	20.0	20.0	20.0	36,738
		ACI quintiles					n
		Poorest	Second	Middle	Fourth	Richest	
FPAI	Poorest	94.5	5.5	-	-	-	7,347
quintiles	Second	4.4	83.8	11.8	-	-	7,347
	Middle	0.9	10.8	80.5	7.8	-	7,343
	Fourth	0.1	-	7.7	87.1	5.1	7,344
	Richest	-	-	-	5.2	94.8	7,357
Total		20.0	20.0	20.0	20.0	20.0	36,739
		API-2 quintiles					n
		Poorest	Second	Middle	Fourth	Richest	
API-1	Poorest	98.5	0.6	0.1	0.3	0.6	7,346
quintiles	Second	1.1	90.0	8.9	0.0	-	7,339
	Middle	0.4	7.5	63.9	28.0	0.1	7,355
	Fourth	-	1.7	22.0	48.1	28.2	7,345
	Richest	-	0.2	5.0	23.6	71.2	7,354
Total		20.0	20.0	20.0	20.0	20.0	36,738

…/…

		ACI quintiles					n
		Poorest	Second	Middle	Fourth	Richest	
API-1 quintiles	Poorest	89.4	10.6	-	-	-	7,346
	Second	10.3	74.7	15.1	-	-	7,339
	Middle	0.3	14.0	68.2	17.4	-	7,355
	Fourth	-	0.7	16.6	74.4	8.2	7,345
	Richest	-	-	0.1	8.2	91.7	7,354
Total		20.0	20.0	20.0	20.0	20.0	36,738
		ACI quintiles					n
		Poorest	Second	Middle	Fourth	Richest	
API-2 quintiles	Poorest	88.4	11.6	-	-	-	7,346
	Second	10.5	72.1	16.8	0.6	-	7,343
	Middle	0.1	15.7	64.4	16.4	3.4	7,348
	Fourth	0.3	0.7	18.7	57.4	23.0	7,346
	Richest	0.7	-	0.1	25.6	73.6	7,355
Total		20.0	20.0	20.0	20.0	20.0	36,738

Table 4
Degree of agreement between quintiles of economic status constructed by the Filmer-Pritchett Asset Index, the Asset Prevalence Index, and the Asset Count Index, Kappa values, 1998 TDHS

	Kappa values		
	API-1	API-2	ACI
FPAI	0.777	0.639	0.852
API-1		0.679	0.746
API-2			0.640

For all Kappa values: $p<0.001$.
Source: 1998 Turkey Demographic and Health Survey.

The Kappa statistic[19], calculated to quantify the degree of agreement or correspondence between different indexing approaches also shows that the FPAI quintiles agree well with those of other indexes, particularly the ACI. In fact, the latter produces the highest degree of

19. Cohen's Kappa measures the degree of agreement between the categories of two variables when both are measuring the same object. A value of 1 indicates perfect agreement, and a value of 0 indicates that agreement is no better than chance.

agreement between any pair of indexes. Lowest degrees of correspondence are calculated when quintiles of the API-2 are compared with the quintiles of the other 3 indexes.

7. Economic status and reproductive health

An index of economic status may be used for a variety of reasons in reproductive health research. On a descriptive level, such an index may be useful in showing gross differentials in reproductive health and demographic behavior according to economic status, just as other taxonomies are used to show disparities, like those of region, urban-rural residence, religion, ethnicity, and education[20]. Alternatively, one may seek to understand, through multivariate analyses, whether economic competence is in fact independently correlated with and influences reproductive health and demographic behavior. From a service delivery perspective, the identification of the relatively poor and their reproductive and demographic behavior may be important, so that pro-poor service and policy strategies can be developed to eliminate disparities and inequalities. Hence, for one reason or another, the value and usefulness of an index of economic status can be assessed by the extent to which it reveals the differentials with respect to indicators of reproductive health and demographic behavior. The recent World Bank effort to show disparities in reproductive health and demographic behavior by economic status can be considered as an attempt in this respect (Gwatkin *et al.*, 2000; World Bank, 2002; Rutstein, 2002).

At first glance, this standpoint appears to bear a disturbing tautology. The *a priori* assumption that economic status is in fact associated with reproductive health/demographic behavior may simply not be true. However, if it is the case that economic status is in fact a powerful predictor of reproductive health behavior, then the quest for maximizing differences in reproductive health between the relatively rich and the relatively poor as a means to demonstrate the usefulness of an index is justified.

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20. In the main report of the TDHS, the following were used as socioeconomic background variables for most of the tables: region, type of place of residence and education. No proxy variables for economic status were included.

To test whether this is true, the four indexes of economic status, together with other socioeconomic variables, are regressed on a number of dependent demographic/reproductive health variables. In these forward stepwise logistic regressions, the standardized z scores calculated for the four indexes are alternated without changing the remaining set of socioeconomic variables, so as to be able to assess the comparative effects of the indexes on reproductive health/demographic variables in a somewhat standardized way. Logistic regression is an appropriate multivariate technique for this purpose, since it allows the use of dichotomous dependent variables (which is the case with all reproductive health/demographic variables considered, as described below), and the use of continuous or categorical independent variables.

The following reproductive health variables were constructed as (dichotomous) dependent variables for the regressions:

- *Diarrhea prevalence:* The proportion of children under 5 who had had diarrhea during the 15 days prior to the TDHS, based on mothers' reports concerning the presence of loose stools.
- *Underweight prevalence:* The proportion of children under 5 at the time of the TDHS, whose weights were below minus two standard deviations from the median reference standard for their age, established by the World Health Organization, the US Centers for Disease Control, and the US National Center for Health Statistics (WHO/CDC/NCHS).
- *Stunting prevalence:* The proportion of children under 5 at the time of the TDHS whose heights were below minus two standard deviations from the median reference standard for their age, established by WHO/CDC/NCHS.
- *Prenatal care from a medical doctor:* The proportion among live births during the 5 years prior to the TDHS for which women received at least one prenatal care consultation from a medical doctor.
- *Delivery attendance of medical staff:* The proportion among live births during the 5 years prior to the TDHS that were attended by medical staff, including medical doctors, midwives and nurses.
- *Delivery at health facility:* The proportion among live births during the 5 years prior to the TDHS who were delivered at a health facility, such as a hospital or health center.

- *Post-neonatal (PNN) mortality:* The probability of dying after the first month of life but before the first birthday. Live births during the period 1-9 years prior to the survey were included in the analyses[21].
- *Use of family planning:* The proportion among women aged 15-49 who were using, at the time of the TDHS, any method of contraception (modern or traditional) to avoid or delay pregnancies.

A total of 32 logistic regressions were carried out (8 dependent variables, regressed with 4 sets of independent variables each time, with alternating indexes of economic status). All resulting regression equations were significant at the 0.001 level. Most independent variables were used for all regressions. These included the region of residence, type of place of residence, region of residence until age 12, mother's (or woman's) level of education, father's (or husband's) level of education, mother's (or woman's) gender attitude score, and parents' (or couple's) mother tongue[22]. These are sociocultural and socioeconomic variables commonly used in multivariate analyses of reproductive health behavior in Turkey. Additionally, other independent variables were entered into regressions depending on the reproductive health indicator considered. These included the presence of health in-

21. The post-neonatal mortality variable was constructed as a dichotomous variable by considering a real birth cohort in the denominator. In other words, the probability was constructed as a proportion which includes in its numerator those infants who died during the post-neonatal period, and those infants who had survived until the end of the first month of life in its denominator. Live births during the last one year prior to TDHS were excluded since some of these children would have not completed the risk of dying during the post-neonatal period at the time of the TDHS.

22. These variables stand for the following: Region of residence refers to the 5 regions of the country at the time of the survey, where the Eastern region is the least and the Western region is the most developed. Type of place of residence refers to urban or rural residence of the household at the time of the survey. Settlements with more than 10,000 population are designated as urban areas. The gender attitude score was constructed by combining the responses of women to 4 statements regarding gender issues: Women scored one point from each of the following if they agreed that a) men are wiser than women, b) Women should not argue with men, c) Important decisions in the household should be taken by men, d) Sons' education is more important than daughters' education. The gender attitude score ranged from 0 (no agreement with the statements) to 4 (agreement with all statements). Mother tongue was used as a proxy for ethnic background. Other common variables are self-explanatory.

surance of parents[23] in the case of prenatal care from a medical doctor, delivery attendance of medical staff, and delivery at a health facility. Presence of a medical problem around the time of birth[24] was used as an independent categorical variable in the case of delivery attendance of medical staff and delivery at a health facility, while the number of living children and years since first marriage were used in the regressions on the use of family planning.

Results show that the economic index scores entered all of the logistic regression equations with very powerful degrees of significance. In all 32 regressions, economic indexes were significant at the 0.001 level, entered the regression equations at the first or second steps, and were shown to have considerable net effects on the reproductive health indicators. Increases in economic status scores significantly increased the likelihood of provision of prenatal care from a doctor, delivery attendance by medical staff, delivery at a health facility, and use of family planning. On the other hand, gains in economic status were negatively associated with the prevalence of diarrhea, underweight and stunting in children, and with post-neonatal mortality risks. Regression results leave no doubt that long-run wealth (that asset-based indexes are supposed to approximate) is a powerful determinant of reproductive health behavior.

On the other hand, mixed results are obtained for the comparative net effects of different economic status indexes, when specific reproductive health variables are regressed and all other sociocultural variables are kept constant. Since the levels of significance of all indexes in all regressions are equal, it is possible to compare the coefficients of indexes when regressed on the same dependent variable. For this comparison, a 5% cut-off of proximity is used. If the coefficient of an index is within 5% of that of the index which appears to be the best predictor, this is considered to be sufficiently close. The best predicting index is the index that has a coefficient with the largest absolute difference from unity.

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23. In cases when (would-be) parents are covered by a health insurance scheme, they are fully or partially exempted from paying towards prenatal consultations or deliveries.

24. Women were asked a series of questions to explore whether they had had any medical problems around the time of birth. The medical problems specified were: a) regular labor which had lasted more than 12 hours, b) excessive bleeding that was life threatening (as perceived by the respondent), c) high fever with bad smelling vaginal discharge, d) convulsions not caused by fever, and e) episiotomy. The dichotomous variable constructed from these information was based on whether the woman had any of these problems.

Table 5
Results of logistic regressions: diarrhea prevalence, 1998 TDHS

	FPAI	API-1	API-2	ACI
Region of residence				
West	1.0000	1.0000	1.0000	1.0000
South	1.1631	1.1602	1.1841	1.1752
Central	1.3190*	1.3119*	1.3400*	1.3260*
North	1.0504	1.0489	1.0679	1.0450
East	1.9097***	1.9324***	1.9602***	1.9190***
Type of place of residence				
Urban				
Rural				
Mother's region until age 12				
West				
South				
Central				
North				
East				
Mother's education				
None				
Primary				
Secondary				
Higher				
Father's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	0.9409	0.9289	0.9354	0.9409
Secondary	0.9099	0.9005	0.8855	0.9178
Higher	0.4916**	0.5089**	0.4520**	0.4895**
Mother's gender attitude score	1.0629*	1.0643*	1.0675*	1.0649*
Parents' mother tongue				
Both Turkish	1.0000	1.0000	1.0000	1.0000
Both Kurdish	0.7597*	0.7641*	0.7633*	0.7629*
Turkish and Kurdish	2.0988***	2.0757**	2.0899**	2.1178***
Other	0.9795	0.9781	0.9708	1.0012
Economic index score	0.7883***	0.7638***	0.8225***	0.7913***
Constant	-0.9773***	-0.9781***	-0.9849***	-0.9758***
Entered at step	1	1	1	1
No. of children under age 5	3,310	3,310	3,310	3,306

Note: A shaded area shows that the variable was insignificant and did not enter the forward stepwise logistic regression equation.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Source: 1998 Turkey Demographic and Health Survey.

Table 6
Results of logistic regressions: prenatal care from a medical doctor, 1998 TDHS

	FPAI	API-1	API-2	ACI
Region of residence				
West	1.0000	1.0000	1.0000	1.0000
South	1.1079	1.0797	1.0923	1.0885
Central	1.0307	0.9999	1.0330	1.0174
North	0.8531	0.8455	0.8637	0.8632
East	0.4532***	0.4612***	0.4418***	0.4554***
Type of place of residence				V
Urban	1.0000	1.0000	1.0000	1.0000
Rural	0.6915***	0.6383***	0.6789***	0.6993***
Mother's region until age 12				
West	1.0000	1.0000	1.0000	1.0000
South	0.3029***	0.3133***	0.3042***	0.3017***
Central	0.3112***	0.3226***	0.3060***	0.3127***
North	0.3164***	0.3216***	0.3134***	0.3171***
East	0.2935***	0.3295***	0.2929***	0.2890***
Mother's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	1.9763***	1.8969***	1.9886***	2.0014***
Secondary	3.2208***	3.0381***	3.3130***	3.3024***
Higher	6.5250*	5.7325***	7.3414**	6.9328**
Father's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	0.7859	0.7759	0.7919	0.7961
Secondary	1.1700	1.1754	1.2002	1.1915
Higher	1.0120	1.0002	1.1007	1.0670
Mother's gender attitude score	0.8094***	0.8027***	0.8057***	0.8086***
Parents' mother tongue				
Both Turkish		1.0000		
Both Kurdish		0.7152*		
Turkish and Kurdish		1.3507		
Other		0.9307		
Presence of health insurance	1.7106***	1.7203***	1.7314***	1.7232***
Economic index score	1.7857***	1.7976***	1.6489***	1.7020***
Constant	1.8550***	1.8727***	1.8658***	1.8582***
Entered at step	1	2	1	1
Number of births (last 5 yrs)	3,422	3,422	3,422	3,417

Note and source: see Table 5.

Table 7
Results of logistic regressions: delivery attendance of medical staff, 1998 TDHS

	FPAI	API-1	API-2	ACI
Medical problem around the time of birth	1.8430***	1.8389***	1.8028***	1.8366***
Region of residence				
West	1.0000	1.0000	1.0000	1.0000
South	1.4437	1.4095	1.4370	1.4063
Central	0.5305	0.5547	0.5628	0.5267
North	0.8642	0.8701	0.8844	0.8753
East	0.6086*	0.5832*	0.5962*	0.6015*
Type of place of residence				
Urban	1.0000	1.0000	1.0000	1.0000
Rural	0.6395***	0.5946***	0.6278***	0.6470**
Mother's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	1.6008***	1.6092***	1.6068***	1.5993***
Secondary	3.5368***	3.5388***	3.6628***	3.5914***
Higher	78.857	66.692	90.055	83.459
Father's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	1.0251	1.0407	1.0287	1.0218***
Secondary	1.8465**	1.9265**	1.8977*	1.8661*
Higher	1.9605	2.0056	2.0442	2.0210**
Mother's gender attitude score	0.8281***	0.8219***	0.8230***	0.8241***
Parents' mother tongue				
Both Turkish	1.0000	1.0000	1.0000	1.0000
Both Kurdish	0.3057***	0.3031***	0.3104***	0.3035***
Turkish and Kurdish	0.3368***	0.3406***	0.3475***	0.3358***
Other	0.4907**	0.5048**	0.5104**	0.4695***
Presence of health insurance	1.4958***	1.5337***	1.5163***	1.5085***
Economic index score	1.8213***	1.9733***	1.6812***	1.7345***
Constant	3.2142*	3.2191***	3.2449*	3.2152*
Entered at step	2	2	2	1
Number of births (last 5 yrs)	3,426	3,426	3,426	3,421

Note and source: see Table 5.

Table 8
Results of logistic regressions: delivery at health facility, 1998 TDHS

	FPAI	API-1	API-2	ACI
Medical problem around the time of birth	2.5605***	2.5549***	2.5192***	2.5463***
Region of residence				
West				
South				
Central				
North				
East				
Type of place of residence				
Urban	1.0000	1.0000	1.0000	1.0000
Rural	0.6282***	0.5941***	0.6065***	0.6272***
Mother's region until age 12				
West	1.0000	1.0000	1.0000	1.0000
South	0.5036***	0.5090***	0.4944***	0.4946***
Central	1.0163	1.0342	1.0029	1.0076
North	1.1290	1.1550	1.1320	1.1350
East	0.4344***	0.4355***	0.4237***	0.4264***
Mother's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	1.4279**	1.4517**	1.4509**	1.4363**
Secondary	2.8192***	2.8505***	2.9897***	2.8921***
Higher	2.4568	2.2866	2.8330*	2.6224
Father's education				
None				
Primary				
Secondary				
Higher				
Mother's gender attitude score	0.8387***	0.8331***	0.8346***	0.8360***
Parents' mother tongue				
Both Turkish	1.0000	1.0000	1.0000	1.0000
Both Kurdish	0.3555***	0.3489***	0.3545***	0.3539***
Turkish and Kurdish	0.5430*	0.5477*	0.5526*	0.5400*
Other	0.3155***	0.3157***	0.3221***	0.3106***
Presence of health insurance	1.7299***	1.7653***	1.7571***	1.7484***
Economic index score	1.5132***	1.5527***	1.4048***	1.4530***
Constant	1.2602***	1.2571***	1.2821***	1.2640***
Entered at step	2	2	2	2
Number of births (last 5 yrs)	3,414	3,414	3,414	3,409

Note and source: see Table 5.

Table 9
Results of logistic regressions: underweight prevalence, 1998 TDHS

	FPAI	API-1	API-2	ACI
Region of residence				
West	1.0000	1.0000	1.0000	1.0000
South	1.7156*	1.7431	1.6980*	1.7383*
Central	1.0438	1.0516	1.0262	1.0420
North	0.9305	0.9400	0.9071	0.9092
East	2.4019***	2.5381***	2.3922***	2.4183***
Type of place of residence				
Urban				
Rural				
Mother's region until age 12				
West				
South				
Central				
North				
East				
Mother's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	0.5758**	0.5631***	0.5810**	0.5713**
Secondary	0.4169	0.4092	0.4158	0.4074*
Higher	0.0761	0.0822	0.0688	0.0713
Father's education				
None				
Primary				
Secondary				
Higher				
Mother's gender attitude score				
Parents' mother tongue				
Both Turkish				
Both Kurdish				
Turkish and Kurdish				
Other				
Economic index score	0.6388***	0.6085***	0.6421***	0.6527***
Constant	-3.2812***	-3.2699***	-3.3066***	-3.2895***
Entered at step	2	2	1	2
No. of children under age 5	2,737	2,737	2,737	2,735

Note and source: see Table 5.

Table 10
Results of logistic regressions: stunting prevalence, 1998 TDHS

	FPAI	API-1	API-2	ACI
Region of residence				
West	1.0000	1.0000	1.0000	
South	0.9548	0.9551	0.9682	
Central	0.9107	0.9031	0.9186	
North	0.9672	0.9649	0.9693	
East	1.6784**	1.7305**	1.7305**	
Type of place of residence				
Urban				
Rural				
Mother's region until age 12				
West				1.0000
South				1.2101
Central				1.0394
North				1.2908
East				1.8916**
Mother's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	0.5837***	0.5815***	0.5827***	0.5848***
Secondary	0.4225***	0.4339***	0.4090***	0.4295***
Higher	0.2311	0.2653	0.2032	0.2306
Father's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	0.6402*	0.6317*	0.6364*	0.6482*
Secondary	0.5015**	0.4925**	0.4880**	0.5152**
Higher	0.4084*	0.4151*	0.3778*	0.4258*
Mother's gender attitude score				
Parents' mother tongue				
Both Turkish				
Both Kurdish				
Turkish and Kurdish				
Other				
Economic index score	0.6525***	0.5998***	0.6892***	0.6549***
Constant	-2.1620***	-2.1443***	-2.1851***	-2.1764
Entered at step	2	2	2	2
Number of cases	2,737	2,737	2,737	2,735

Note and source: see Table 5.

Table 11
Results of logistic regressions: post-neonatal mortality, 1998 TDHS

	FPAI	API-1	API-2	ACI
Region of residence				
West				
South				
Central				
North				
East				
Type of place of residence				
Urban				
Rural				
Mother's region until age 12				
West				
South				
Central				
North				
East				
Mother's education				
None				
Primary				
Secondary				
Higher				
Father's education				
None				
Primary				
Secondary				
Higher				
Mother's gender attitude score				
Parents' mother tongue				
Both Turkish				
Both Kurdish				
Turkish and Kurdish				
Other				
Economic index score	0.4330***	0.3949***	0.5131***	0.4579***
Constant	-4.2296***	-4.2218***	-4.1106***	-4.1937***
Entered at step	1	1	1	1
No. of births (last 1-9 yrs)	2,698	2,698	2,698	2,694

Note and source: see Table 5.

Table 12
Results of logistic regressions: use of family planning, 1998 TDHS

	FPAI	API-1	API-2	ACI
Region of residence				
West	1.0000	1.0000	1.0000	1.0000
South	1.0118	1.0060	1.0242	1.0140
Central	1.0496	1.0550	1.0726	1.0606
North	1.0305	1.0365	1.0307	1.0617
East	0.4774***	0.4646***	0.4826***	0.4851***
Type of place of residence				
Urban				
Rural				
Woman's region until age 12				
West	1.0000	1.0000	1.0000	1.0000
South	0.5074***	0.5095***	0.4969***	0.5070***
Central	0.7919	0.7927	0.7753	0.7914
North	0.6450**	0.6387	0.6430**	0.6389**
East	0.6805***	0.6865*	0.6681**	0.6809**
Woman's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	1.4375***	1.4343***	1.4433***	1.4549***
Secondary	1.4280*	1.3948*	1.4830**	1.4328*
Higher	0.9846	0.9597	1.0750	0.9947
Number of living children	1.6973***	1.6961***	1.6916***	1.6931***
Years since first marriage	0.9147***	0.9162***	0.9157***	0.9148***
Husband's education				
None	1.0000	1.0000	1.0000	1.0000
Primary	2.2192***	2.2874***	2.2079***	2.2087***
Secondary	2.5021***	2.6210***	2.4861***	2.4678***
Higher	3.0736***	3.2070***	3.1848***	3.0801***
Woman's gender attitude score		0.9416*		
Couple's mother tongue				
Both Turkish	1.0000	1.0000	1.0000	1.0000
Both Kurdish	0.4258***	0.4188***	0.4291***	0.4251***
Turkish and Kurdish	1.5728	1.5875	1.5999	1.5651
Other	0.5871**	0.5820**	0.5963**	0.5985**
Economic index score	1.3047***	1.2108***	1.2998***	1.3078***
Constant	0.5204***	0.5798***	0.5464***	0.5304***
Entered at step	6	6	6	6
No. of married, exposed women aged 15-49	4,458	4,458	4,457	4,450

Note and source: see Table 5.

The FPAI is not the best predictor in any of the regression sets. In four sets, concerning those on diarrhea prevalence and prenatal and delivery care, API-1 performs the best. In two of the remaining reproductive health variables, underweight prevalence and use of family planning, the ACI has the greatest influence on the dependent variable, while the API-2 appears to be the best predictor of stunting and post-neonatal mortality. In most cases, the coefficients of 2 or 3 indexes are within 5% of each other. The only exception is post-neonatal mortality, where API-2 has the smallest coefficient (has the maximum lowering effect on post-neonatal mortality among all indexes), and the coefficients of other indexes are 10 to 23% higher than that of the API-2. It can safely be concluded from these results that although economic status appears to have net and significant effects on reproductive health behavior, none of the indexes can be preferred over the others in terms of their strength in predicting reproductive health behavior.

One noteworthy finding from the regressions is that for post-neonatal mortality, the economic status index scores were the only variables that remained in the final logistic regression equations. All other variables, such as mother's education, usually considered to have net effects on early age mortality, albeit usually through multivariate analyses that lack good proxies for wealth, were insignificant and were left out of the final equations.

Results pertaining to other variables are beyond the scope of this paper, but there are some findings that are worthy of emphasis. It appears from the findings that type of place of residence is only effective on reproductive health behavior when the behavior in question is directly related with access to health services, in the case of use of medical prenatal and delivery services. This probably reflects the varying accessibility of such services in urban and rural areas. Couples' mother tongue, a proxy variable for ethnic background, on the other hand, is effective both when use of services is relevant, as well as in cases like diarrhea and use of family planning. These results may indicate, on one hand, the difficulties of ethnic groups in Turkey, particularly the Kurds, in using the services which are extremely Turkish-language dominated, and the effect of different cultural backgrounds on child morbidity and the likelihood of couples' efforts to limit childbearing. Women's (mother's) education has net, statistically significant and considerable effects on almost all reproductive health behavior as expected, with the exception of diarrhea and post-neonatal mortality. An interesting find-

ing is that husband's education is more effective than woman's education in increasing the use of family planning; a somewhat expected result since a considerable proportion of family planning methods used in Turkey are male-oriented methods. Also of interest is that health insurance increases the likelihood of using prenatal care and delivery services considerably. The effect of economic status continues even after the presence of health insurance is controlled for. This indicates that cost is a major obstacle in regard to the use of reproductive health services in Turkey. Finally, gender scores of mothers are found to be significant in most of the equations. The higher the gender score, the worse the reproductive health outcome, e.g. the higher the prevalence of diarrhea, the lower the use of prenatal and delivery services. If gender scores of women can be taken as an indication of the existence of patriarchy in the household, then female autonomy appears to be influential in producing positive reproductive health outcomes. In sum, however, the estimated logistic regression equations indicate that economic status is a strong predictor of reproductive health behavior, but that other social and cultural attributes also have independent predictive effects.

8. Rich-poor differentials

Having ascertained the net effect of economic status on reproductive health behavior, one can compare the relative performance of economic status indexes by assessing the extent with which such indexes reflect differences in reproductive health indicators.

For the assessment of the performance of the four indexes of economic status, one possible approach is to calculate and compare the so-called rich-poor ratios in reproductive health indicators across various indexing approaches. These are simply the ratios between the value of the indicator of reproductive health in the highest quintile (the "rich") to that of the same indicator in the lowest quintile (the "poor"), expressed as absolute deviations from unity[25]. The higher the rich-poor

25. Such ratios are widely used to assess the performance of economic status indexes (UNICEF, 2002; Filmer and Pritchett, 1998; 1999; Gwatkin *et al.*, 2000; Johnson, 2001; Rutstein, 2002). In some applications, however, reverse (i.e. poor-rich) ratios are calculated, and usually, the initial value of the ratio is used. However, it is useful to transform the ratio into an absolute deviation from unity, since the

ratio, the wider differential between the poor and the rich it points out, i.e. the better it may be regarded to capture the differential between the rich and the poor. In scientific notation, rich-poor ratios are calculated as:

$$RPR = abs\left(\frac{x_5}{x_1} - 1\right)$$

where x_1 and x_5 are the estimates of the reproductive health indicator for the first and fifth quintiles respectively.

Gross rich-poor ratios were calculated with respect to the 8 reproductive health variables described in the previous section. The ratios are termed as gross, since they are descriptive in nature and do not imply any causal relationships between economic status and reproductive health. They are calculated without any consideration of other sociocultural or socioeconomic variables which may be confounding the relationship between economic status and the reproductive health indicator in question. It may not be wealth or economic status *per se* that influence reproductive health. Rather, determining factors may be other (non-economic) characteristics such as education which may be simultaneously associated with both economic status and reproductive health.

The gross poor-rich ratios with respect to selected reproductive health indicators by the four indexing approaches reveal that in general, there is little difference between the indexes in revealing differentials by economic status. The highest values of the GRPR are obtained for prenatal care, while the rich-poor gap in terms of diarrhea prevalence appears to be lowest. For all reproductive health indicators, differentials between the rich and the poor are large. However, in almost all cases, the API-1, API-2 and the ACI reveal rich-poor gaps as large as, if not larger than the FPAI. The FPAI performs significantly better than the other indexes in a number of cases, particularly in regard to delivery at health facilities and post-neonatal mortality, but for some reproductive health indicators, other indexes perform as well or better: for diarrhea prevalence, rich-poor ratios calculated on the basis of the

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values of some demographic/reproductive health indicators are expected to decline by wealth (for instance, mortality rates), while others would be expected to increase (such as delivery attendance). Naturally, when transformed into absolute deviations from unity, the poor-rich and rich-poor ratios produce the same results.

Table 13
Estimates of selected reproductive health variables by quintiles of economic status, and gross rich-poor ratios (GRPR)[a], 1998 TDHS

Index	Diarrhea prevalence	Prenatal care from a medical doctor	Delivery attendance of medical staff	Delivery at health facility	Stunting	Underweight	PNN mortality (per 1000)	Use of family planning
FPAI								
Poorest	40.4	38.6	55.9	48.4	27.7	16.1	43.7	48.8
Second	31.9	56.0	75.3	62.9	22.4	10.6	22.9	56.3
Middle	31.7	77.9	90.2	83.4	12.8	6.9	15.7	64.9
Fourth	26.2	86.3	94.8	86.2	8.5	3.0	10.1	69.4
Richest	16.1	93.0	98.4	94.8	3.9	2.2	5.6	74.2
GRPR	0.603	1.409	0.760	0.959	0.859	0.863	0.872	0.520
API-1								
Poorest	40.4	38.7	56.5	49.5	27.5	15.3	43.6	49.9
Second	32.7	56.9	74.8	62.9	21.8	10.3	18.0	56.4
Middle	30.5	77.5	91.0	82.5	13.6	8.3	22.0	65.9
Fourth	26.4	86.1	93.8	86.9	9.8	2.7	7.7	68.0
Richest	16.4	91.7	97.8	93.1	3.0	2.1	7.3	73.8
GRPR	0.594	1.370	0.731	0.881	0.891	0.863	0.833	0.479
API-2								
Poorest	40.3	38.5	56.0	48.9	27.6	15.5	43.5	49.5
Second	33.2	55.0	74.6	61.9	22.6	11.2	18.9	56.3
Middle	28.7	80.8	91.4	84.7	12.5	6.9	19.1	63.2
Fourth	26.0	85.4	94.6	87.0	9.4	3.7	13.5	70.5
Richest	18.9	90.0	96.6	91.4	4.0	1.8	4.5	74.1
GRPR	0.531	1.338	0.725	0.869	0.855	0.884	0.897	0.497
ACI								
Poorest	39.5	39.0	57.2	50.0	27.6	15.5	45.5	49.7
Second	33.8	58.1	74.9	63.2	20.4	10.7	17.4	57.7
Middle	29.6	76.6	90.1	82.3	15.6	7.2	19.1	62.5
Fourth	28.0	84.5	93.4	84.9	8.6	3.5	10.8	68.9
Richest	15.6	92.7	98.4	94.5	3.4	2.2	6.2	75.2
GRPR	0.604	1.377	0.720	0.890	0.877	0.858	0.864	0.513
All	30.1	67.9	81.1	73.1	16.0	8.3	33.4	63.9

a. The GRPR is calculated as the absolute deviation from unity of the ratio of the value of the indicator in the fifth quintile to the value of the indicator in the first quintile.
Source: 1998 Turkey Demographic and Health Survey.

ACI are larger, for instance; for stunting prevalence, API-1 performs better; for underweight prevalence, the API-2 produces a higher rich-poor ratio than the other indexes.

Although gross rich-poor ratios provide some evidence to the effect that there is little difference between various indexing approaches in terms of revealing differentials between the rich and the poor in regard to reproductive health, such analyses are insufficient from a number of respects. For one, gross differentials may be profound, but the reliability of the gross rich-poor ratios may not be statistically justified due to possible high components of variance in the respective estimates for the rich and the poor. Secondly, such ratios are gross estimates, as indicated earlier. Hence, it would be useful to calculate 'net' rich-poor ratios to show the rich-poor differentials in reproductive health when the effects of other variables are controlled for[26].

Logistic regression is convenient for this purpose too, since it allows entering the economic status quintiles as categorical independent variables. If the lowest quintile is taken as the reference category, then odds ratios estimated for each of the other four quintiles represent net differences of the observations in the other quintiles from the poorest quintile, on the basis of the dependent variable, and by including other independent variables. The ratios are termed as 'net', since they are calculated after the effects of other confounding factors are controlled for. It is also possible to estimate the statistical significance of the net differences, therefore accounting for possible differences in variation coefficients of the estimates for observations in different quintiles. The absolute deviation of the value of the coefficient for the fifth quintile from unity provides the net rich-poor ratio.

The odds ratios shown in Table 14 were estimated by using the same independent variable sets shown in Tables 5 to 12. In other words, the only difference of the 32 logistic regressions undertaken here was the inclusion of the economic status indexes as categorical variables (in the form of quintiles of wealth). It is therefore not surprising that the economic status index variables entered all equations with considerable statistical significance, as in the case of previous logistic regressions that used economic status as a continuous variable. In all regression equations that were fitted, the odds ratios of the richest

26. Naturally, these ratios are 'net' only on the basis of the other independent variables which are used and controlled for.

Table 14
Odds ratios for quintiles of economic status for selected reproductive health variables and Net Rich-Poor Ratios (NRPR)[a], 1998 TDHS

Index		Diarrhea prevalence	Prenatal care from a medical doctor	Delivery attendance of medical staff	Delivery at health facility	Stunting	Underweight	PNN mortality (per 1000)	Use of family planning
FPAI	Poorest	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Second	0,773*	1,256	1,517*	1,219***	0,984	0,771	0,515**	1,058
	Middle	0,873	2,270***	2,308***	2,100***	0,660	0,666	0,351***	1,459**
	Fourth	0,722*	2,833***	2,964***	1,830***	0,484***	0,306***	0,224***	1,672***
	Richest	0,454***	3,320***	7,533***	4,508***	0,291***	0,302**	0,130***	1,809***
	NRPR	*0,546*	*2,320*	*6,533*	*3,508*	*0,709*	*0,698*	*0,870*	*0,809*
API-1	Poorest	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Second	0,801	1,216	1,382*	1,109***	0,934	0,791	0,418***	1,043
	Middle	0,820	2,049***	2,427***	1,731***	0,726	0,876	0,563*	1,515**
	Fourth	0,732*	2,806***	3,308***	1,803***	0,571**	0,304***	0,202***	1,535***
	Richest	0,462***	2,811***	4,951***	2,749***	0,213***	0,320**	0,204***	1,646***
	NRPR	*0,538*	*1,811*	*3,951*	*1,749*	*0,787*	*0,680*	*0,796*	*0,646*
API-2	Poorest	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Second	0,827	1,162	1,453	1,121	0,968	0,841	0,442***	1,077
	Middle	0,798	2,551***	2,497***	2,053***	0,683*	0,739	0,493**	1,287*
	Fourth	0,738*	2,604***	2,679***	1,815***	0,597*	0,434**	0,358***	1,705***
	Richest	0,543***	3,368***	3,996***	2,319***	0,265***	0,231***	0,121***	1,858***
	NRPR	*0,457*	*2,368*	*2,996*	*1,319*	*0,735*	*0,769*	*0,879*	*0,858*

ACI	Poorest	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Second	0,895	1,269	1,286	1,059	0,903	0,839	0,373***	1,033
	Middle	0,796	2,108***	2,228***	1,746***	0,836	0,717	0,412***	1,285*
	Fourth	0,780	2,502***	2,298***	1,514*	0,488***	0,358***	0,231***	1,474**
	Richest	0,443***	3,277***	7,035***	3,549***	0,258***	0,318**	0,136***	1,839***
	NRPR	*0,557*	*2,277*	*6,035*	*2,549*	*0,742*	*0,682*	*0,864*	*0,839*

a. The Net Rich-Poor Ratio is calculated as the absolute deviation of the odds ratio of the fifth quintile from unity.
Levels of significance are indicated as follows: *** $p<0.001$, ** $p<0.01$, * $p<0.05$.
Source: 1998 Turkey Demographic and Health Survey.

quintiles were significant at the 0.001 or 0.01 level (Table 14). This means that there were sufficient differences between the reproductive health indicators of the observations in the first and fifth quintiles – i.e. that rich-poor differentials are significant[27].

The largest rich-poor differentials are obtained for delivery attendance from medical staff, prenatal care, and deliveries at health facilities. These are directly cost-related variables, as mentioned earlier. On the other hand, the relationship of economic status quintiles with diarrhea prevalence, stunting, underweight prevalence, post-neonatal mortality and use of family planning is indirect in nature, where economic competence would be expected to have more indirect effects on all of these variables in a more complicated fashion. However, the rich-poor differentials are still significant: A child under age 5 and living in a rich household is 45-56% (depending on the economic status index used) less likely to have had diarrhea than his/her counterparts in poor households. Stunting and underweight prevalence is profoundly more prevalent among children in poor households. Children in such households are 71-79% more likely to be stunted, and 68-77% more likely to be underweight. Poverty also appears to increase post-neonatal mortality considerably: children in rich households are 80-88% less likely to die during the post-neonatal period.

Economic status also affects the likelihood of contraceptive use of women. A woman living in a rich household is 65-86% more likely to use contraception than a woman living in a poor household.

In most cases, the net rich-poor differentials uncovered by the four different indexing procedures are very similar. If a 5% cut-off of proximity is used, the net rich-poor ratios of 2 or 3 different indexes are sufficiently close to each other for most reproductive health indicators. The FPAI produces the largest net rich-poor ratio in regard to 3 reproductive health variables, the API-2 also produces the largest ratios for 3 variables. In general, the higher the average of the net rich-poor ratios for a reproductive health variable, the higher is the variation between the ratios indicated by different indexes.

It is noteworthy that the relatively poor appear to have substantially different reproductive health situations than not only the richest,

27. Other independent variables that were used in the estimation of the odds ratios are not shown here, since the objective is to compare the odds ratios and net rich-poor ratios for the various indexes.

but from all other wealth groups. A move from the poorest to the second quintile, for instance, has the net effect of reducing post-neonatal mortality by 50 to 70%. The same comparison yields an improvement of about 29 to 52% in delivery attendance of medical staff, depending on the economic status index adopted.

One other criterion that can be used to assess the performance of the indexes is the presence or absence of monotonous increases or decreases (depending on the direction of the expected relationship) in the odds ratios for observations in the quintiles. In most cases, odds ratios indeed increase or decrease in a monotonous fashion by quintiles of wealth. This is true for 23 out of 32 logistic regressions that were performed.

9. Conclusions

Asset-based indexes of economic status are not new innovations, but their use in the area of reproductive health and demographic behavior has been fuelled recently by the formulation of the Filmer-Pritchett Asset Index, and the adoption of the index by major international organizations in the field as a useful tool for uncovering differentials in reproductive health/demographic behavior by economic status.

The choice of assets for the construction of indexes of economic status is based on pragmatic rather than conceptual considerations. Such indexes, when constructed using demographic/reproductive health survey data, are likely to fill in important information gaps, since they enable the construction of linkages between the relative positions of households in terms of economic status and their social/cultural/health behavior. However, although evidence suggests that the asset ownership-consumption expenditures relationship is quite close (Filmer and Pritchett, 1998; Montgomery *et al.*, 1999), the usefulness of such indexes is limited with their ability to measure relative, rather than absolute wealth. Nevertheless, the advent of robust indexes of such nature is still a considerable gain for research in the field of population.

The calculations and comparisons in this paper are confined to the situation in Turkey, and are not necessarily representative of the situations in other countries. However, there is sufficient evidence that the use of sophisticated statistical techniques to construct an index of eco-

nomic status (in the case of this paper, the Filmer-Pritchett Asset Index) does not enhance the robustness and explanatory power of the analyses. On the contrary, simple asset-based indexes, such as the Asset Count Index and the Asset Prevalence Index, are likely to perform as well as the former. On the basis of the Turkish DHS data, different indexing approaches produce similar stratification and relative ranking of households into wealth quintiles, and perform with similar effectiveness in predicting reproductive health behavior.

The results also show convincingly that variables on economic status are indispensable for our understanding of reproductive health behavior, be it in descriptive or analytical studies. Descriptive reports that are produced on the basis of findings from demographic/reproductive health surveys miss information on a very important background variable if background variables on economic status are not constructed; multivariate analyses seeking to understand the determinants of demographic/reproductive health behavior are likely to be concluded with rather incomplete (and perhaps misleading) conclusions if variables on economic status are not accounted for. In short, methodological efforts to produce robust measures or indexes of economic status that can be constructed by using survey data are justified.

The similarity of different asset-based indexing approaches means that one is likely to obtain similar results whichever the index approach is used. This means that asset-based indexes, based on simple logic rather than statistical perfection can be used with the same effectiveness and can be used by a wider audience which invariably comprises those who are unfamiliar with techniques such as principal components analysis. The wide use of the latter, to the extent of including the resulting economic status index in descriptive survey reports carries the inherent danger that a descriptive tool would be used without the full understanding of it by the producer, given the extensive sharing of relatively simple and user-friendly computer programs with those who are less statistically minded and would, in most cases, not have the luxury of attempting to understand the sophisticated technique in question.

The findings in this paper have to be confirmed with data from other countries; but also, there is need to work on new approaches towards improving the performance and robustness of asset-based indexes. In addition to the inability of these indexes in representing absolute poverty or absolute levels of wealth, a major problem that remains is that comparisons across countries and in time are not possible, and

moreover, intra-country comparisons may not be valid due to the association between the possession of household assets and tastes, cultural backgrounds, and choice patterns of households. A possible improvement in asset-based indexes could therefore be the use of external information such as average national income to make quintiles of wealth comparable, and in regard to the selection of assets that should be included.

References

DIAMOND, I., Z. MATTHEWS, and R. STEPHENSON (2001), *Assessing the Health of the Poor: Towards a Pro-poor Measurement Strategy*, DFID Health Systems Resource Center, London.

EL KHOURY, M., and U. PANIZZA (2001), "Poverty and social mobility in Lebanon: A few wild guesses", Paper presented at the *Workshop on the Analysis of Poverty and Its Determinants in the Middle East and North Africa, July 31-August 1, 2001, Sana'a, Yemen.*

EL-KOGALI, S. E., and E. A. SULIMAN (2001), "Poverty, human capital and gender: A comparative study of Yemen and Egypt", Paper presented at the *Workshop on the Analysis of Poverty and Its Determinants in the Middle East and North Africa, July 31-August 1, 2001, Sana'a, Yemen.*

FERGUSON, B., A. TANDON, E. GAKIDOU, and C. J. L. MURRAY (2002), *Estimating Permanent Income Using Indicator Variables. Evidence and Information for Policy Cluster*, World Health Organization, Geneva.

FILMER, D., and L. PRITCHETT (1998), *Estimating Wealth Effects Without Income or Expenditure Data – or Tears: Educational Enrolment in India*, World Bank Policy Research Working Paper no. 1994, Development Economics Research Group (DECRG), The World Bank, Washington D.C.

FILMER, D., and L. PRITCHETT (1999), "The effect of household wealth on educational attainment: Evidence from 35 countries", *Population and Development Review*, vol. 25, no. 1, p. 85-120.

GAGE, A. J., A. E. SOMMERFELT, and A. L. PIANI (1996), *Household Structure, Socioeconomic Level, and Child Health in Sub-Saharan Africa*, DHS Analytical Reports, No. 1, Macro International Inc., Calverton, Maryland.

GROSH, M., and P. GLEWWE (2000), *Designing Household Survey Questionnaires for Developing Countries: Lessons from 15 Years of the Living Standards Measurement Study Surveys*, The World Bank, Washington D.C.

GROSH, M., and J. MUNOZ (1996), *A Manual for Planning and Implementing the Living Standards Measurement Study Survey*, Living Standards Measurement Study Working Paper, no. 126, The World Bank, Washington D.C.

GWATKIN, D. R., S. O. RUTSTEIN, K. JOHNSON, R. P. PANDE, and A. WAGSTAFF (2000), *Socio-economic Differences in Health, Nutrition and Population in Turkey*, HNP/ Poverty Thematic Group, The World Bank, Washington D.C.

HANCIOGLU, A. (1995), *Construction of an Index of Economic Status from DHS Data*, Unpublished manuscript.

HUIPS and MEASURE DHS+ (1999), *Turkey Demographic and Health Survey 1998*, HUIPS and Measure DHS+, Ankara.

JOHNSON, K. (2001), "Trends in DHS indicators by level of wealth", Presentation at the *39th Seminar on Health/Nutrition/Population (HNP) and Poverty, June 14, 2001, Washington D.C.*

KALAYCIOGLU, S., F. KARDAM, S. TUZUN, and M. ULUSOY (1997), "Approaches and experiments in developing a measure of socioeconomic status for Turkey", Paper presented at the *3rd National Population Conference, 1-4 December, 1997, Ankara, Turkey* (in Turkish).

MONTGOMERY, M. R., K. BURKE, M. GRAGNOLATI, and E. PAREDES (1999), *Measuring Living Standards with Proxy Variables*, Policy Research Division Working Paper no. 129, The Population Council, New York.

RUTSTEIN, S. O. (2002), "Construction of the wealth index and its relationship to DHS data", Presentation at the *Conference on Thirty Years of USAID Efforts in Population and Health Data Collection, National Press Club, June 3-4, Washington D.C.*

TUNCBILEK, E., T. UNALAN, and T. COSKUN, (1996), "Indicators of nutritional status in Turkish preschool children: Results of Turkish Demographic and Health Survey 1993", *Journal of Tropical Pediatrics*, vol. 42, p. 1-7.

UNICEF (2002), *MICS2 – Assessing the Economic Status of Households*, on-line: http://childinfo.org/MICS2/finques/gj00106a.htm (8.9.2002).

UNITED NATIONS (1994), *Programme of Action Adopted at the International Conference on Population and Development, 5-13 September, 1994, Cairo.*

WAGSTAFF, A., and A. S. YAZBECK (2001), "HNP and the poor: The roles and constraints of households and communities", Presentation at the *39th Seminar on Health/Nutrition/Population (HNP) and Poverty, June 14, 2001, Washington D.C.*

WANG, L. (2002), *Determinants of Child Mortality in Low-income Countries: Empirical Findings from Demographic and Health Surveys*", The World Bank.

WORLD BANK (2002), *Country Reports on Health, Nutrition, Population and Poverty*, on-line: http://www.worldbank.org/poverty/health/data. (8.9.2002).

2

VULNERABILITY TOWARDS HIV. AN EXPLORATORY SURVEY OF COUPLES IN THAILAND USING THE LIFE-EVENT HISTORY APPROACH

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1. Introduction

1.1. The concept of vulnerability

HIV infection is closely related to sexuality and reproductive health. It is a sexually transmitted infection, thus affecting both part-

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ners in a couple; it is transmitted to their children, thus jeopardizing their progeny. Although risk behaviors for HIV have been extensively studied in Thailand (Sittitrai *et al.*, 1992; Nelson *et al.*, 1993; Nagachinta *et al.*, 1997; Beyrer *et al.*, 1997) we still do not know the circumstances or combination of circumstances which favor (or protect against) HIV infection in an individual's life history.

In this study, we define "vulnerability" as the circumstances which favor HIV infection, circumstances less biological and behavioral than socio-cultural, psychological and economical. In order to identify vulnerable situations, we take into account not only the intrinsic characteristics of the individuals such as sex, age, psychological profile (risk perception, self esteem, projection in the future), but also the global context in which they live and which drives them to get exposed to the risk of acquiring HIV.

This global context – which includes the family situation, the educational context, the professional, economic, and residential situation, as well as the health/reproductive health situation –, evolves during the course of life, and individuals are going through more or less marked phases of vulnerability that we will try to identify and analyze.

1.2. The life-event history approach

In life-event history approach (Courgeau and Lelièvre, 1996), individual life histories are considered as a continuum of events of various nature involving family, housing, occupation, health, etc. To better understand the complex interactions between these factors – themselves influencing demographic and social behaviors –, specific tools are needed. In standard longitudinal analysis the occurrence over time of an event such as marriage, birth, death, migration, HIV-infection, etc. is analyzed within a well-defined, homogenous group. In life-event history analysis studies, however, it is possible to study the occurrence over time of one or more **interacting** events and take into account simultaneously a large number of individual characteristics, some of which may change over time. Within the life-event history approach, individual life histories are therefore considered as a dynamic factor that affects the dependent variable, e.g. vulnerability to HIV (Courgeau and Lelièvre, 1989; Manton *et al.*, 1992). The underlying hypothesis is that specific life events or life-event sequences may be the precipitating factors that account for increasing or decreasing an individual's risk

behavior, and that the resulting changes in vulnerability cannot be predicted from social, demographic or psychological status alone.

This life-event approach has been insufficiently used in socio-demographic research. Moreover, the role of health events has never been considered in life-event history studies.

1.3. HIV epidemic in Thailand

Thailand was the first Asian country affected by the AIDS epidemic in the late 1980s (Weniger *et al.*, 1991). Among all Asian countries, it is by far the most hardly hit by the epidemic and over one million people have been infected so far (World Bank, 2000). The epidemic first developed among intravenous drug users, and then among sex workers and their clients (Weniger *et al.*, 1991). As the epidemic matured, heterosexual transmission became the major route of infection in the general population and the first cases of mother-to-child transmission of HIV were reported in 1991 (Weniger *et al.*, 1991; World Bank, 2000).

However, considerable efforts have been invested by the government to curtail the epidemic. The Royal Thai Government responded quickly to the HIV/AIDS epidemic and implemented a multi-sectoral AIDS program in 1987. These efforts appear to have been successful to reduce not only the incidence of HIV in the general population but also the prevalence of other sexually transmitted diseases (Nelson *et al.*, 1996; Hanenbert *et al.*, 1994). The overall rate of infection in pregnant women now reaches about 1.5% nationwide (Ministry of Public Health, 2002).

Nevertheless, the number of AIDS cases and AIDS deaths will continue to increase for a number of years, reflecting earlier infection trends (World Bank, 2000). Most of the epidemic's demographic, economic, public health and social impact is still unknown as well as the strategies put in place by the affected families and communities (Nelson *et al.*, 1996; Surasiengsunk *et al.*, 1998; Knodel *et al.*, 2000).

In order to study the vulnerability to HIV infection and its impact on network support, we are combining a life-event history approach with an epidemiological (case/control) approach, to perform a **case-control life-event survey** comparing HIV-infected mothers and their partners with HIV-uninfected mothers and their partners.

2. Objectives

The objective of this pilot study is to evaluate the feasibility of the life-event history approach in the context of HIV in Thailand:

- develop and test a life-event history questionnaire including health and reproductive health history;
- define an appropriate study population and sample selection method;
- assess the acceptability of interviewing couples (each member separately);
- compare life-event history interviews with in-depth interviews.

3. Issues to be explored

A. To understand better the factors of vulnerability towards HIV. These factors include:

- Individual history: family, education, occupation, residential, reproductive/sexual, and health;
- Knowledge, perception of risk and access to information and services;
- Emotional support and social solidarity networks;
- Self-esteem and negotiating skills;
- Representations of the future.

B. To investigate the consequences of HIV infection on the life of the individuals, couples or their families. Using a life-event history approach, it is possible to compare the life-events before and after HIV infection or HIV diagnosis and to identify the specific impact of HIV infection (or its disclosure) in terms of family disruption, employment, network disruption or creation and reproductive decisions.

C. To investigate the possible strategies that can be used by the affected families:

- Access to health care,
- Support for AIDS orphans,
- Legal support,

– Financial support,
– Emotional, religious support,
– Logistical support.

The role of the solidarity networks (family versus society) will be clarified. This information will provide helpful information to policy makers for the design of social strategies for HIV-affected families.

4. Methods

4.1. Population

The pilot study was performed in two sites: a non-governmental organization for people living with HIV/AIDS in a rural village 30 km from Chiang Mai, in Chiang Mai province; and a mother-child hospital in Chiang Mai city. In both sites, respondents had to have at least one child below 3 years old. Their participation was voluntary. Although some reimbursement was provided to the respondents at the end of the interview (transport/time reimbursement), money was never mentioned as an incentive to participate in the study. The purpose of the study was explained to the potential participants and they were asked about consent.

"Cases" (HIV-positive mothers) and their current husbands were interviewed separately and compared to "controls" (HIV-negative mothers) and their current husbands. In order to obtain comparable populations of cases and controls, each case was matched with a corresponding control according to 3 criteria: they had to be selected in the same "site", either in the rural or urban area; they had to have approximately the same age ($\pm$ 3 years); their child had to have approximately the same age ($\pm$ 6 months) in addition to be less than 3 years old.

In the rural site, cases and controls were selected within the community by the head of the organization. They were provided with an appointment for the interview of both partners.

In the mother-child hospital, respondents were at the well-baby clinic for a routine visit for their child and therefore were not expecting to be interviewed. For cases, potential respondents were identified by their usual counselor. They were explained about the study, and were

then introduced to one of the interviewers who would explain the study in more details, and if they agreed, they could either be interviewed the same day or provided with an appointment for a later time, even outside the working hours. Controls were approached by the interviewers while they were waiting for a routine examination of their child.

A few months after the life-event interviews were performed, 6 couples were re-approached for qualitative interviews by the same interviewers. A question guide was developed to cover a similar scope to the life-event interviews. The purpose was to compare the two approaches in terms of interview duration and quality/reliability of the answers.

4.2. Interview process

Two male interviewers interviewed male respondents and two female interviewers interviewed female respondents. The interviews of each partner were performed in two separate, private rooms. The respondents were told that their answers would be kept confidential and that information would not be disclosed to anyone, in particular their partners. The interviewers were all psychiatric nurses who, in addition to their general training in psychiatric counseling and psychotherapy received a specific 3-day training on life-event history interviews and HIV/AIDS counseling.

The framework of the interview was a classical face-to-face interview questionnaire, but all dated events or period of lives were recorded on a calendar-type questionnaire (Figure 1), and therefore the interviewers were switching back and forth between the core questionnaire and the calendar-type questionnaire. The events or durations recorded on the one-sheet calendar could easily be linked together and be visualized at a glance (Figure 1).

The interviewers first introduced themselves and the study objectives. Then they discussed the topics covered by the study: family life, residential life, education, occupation life and health history including reproductive life and HIV. They stressed the fact that the respondent was free to decline from answering any questions if he/she wanted to, that there were no good or bad answers, and that the interview was completely anonymous. Only after this introduction of the study was the consent to participate solicited.

Figure 1. — Life-event history calendar questionnaire: Example

SECTION 1						SECTION 2				
		Family Events				Place of Residence		Co-residents		
Year	Age	Parents & Siblings	Marital Life	Children	Happiness	District	Province	Relationship	Knowledge	Attitude
1	2	3	4	5	6	7,1	7,2	8,1	8,2	8,3
25_ _	0									
25_ _	1									
25_ _	2									
25_ _	3									

SECTION 3					SECTION 4	SECTION 5	SECTION 6
Education/Occupation				Financial	Life	Health	Reprod. Health
Education	Results	Main Occupation	Extra Jobs	Status	Crisis		1st Mens/1st Sex
9,1	9,2	9,3	9,4	10	11	12	13

SECTION 7		
HIV TEST/HIV INFECTION		
Tests/INF	Reasons	Results
14.1	14,2	14,3

In the first section of the interview, after asking the respondent's age, the interviewer continued by asking the living and marital status of the respondent's parents, the frequency of visits, date of separation or death, if relevant. Then, the interviewers asked about the respondent's siblings. The next issue was about marital life, where the interviewers asked for each spouse/partner of the respondent a number of questions to assess the duration and strength of the relationship, the degree of family integration, previous domestic violence, and reasons for separation, visits to commercial sex workers of self or partners. The respondent was asked to grade his/her happiness in the course of one's life, defining these periods by him/herself. For all questions requiring a grading, we used the simple school grading system, which is familiar to Thai people: A for very good, B for good, C for average, D for poor, and F for very poor.

The second section of the interview focused on the respondent's places of residence since birth, as well as the list of co-residents in each place, followed by questions in the next section about their education, their occupations (including extra-jobs) and their financial situation (incomes, assets and debts).

The health history was then recorded, with a special focus on reproductive health including age and circumstances of the first intercourse and a complete contraceptive history, abortion and birth history. Contraceptive history was not recorded for men.

Finally, HIV test history was reconstituted (date and results for the first and subsequent HIV tests). The topics explored were the following: risk perception of HIV infection, date and circumstances of HIV infection, HIV results disclosure, couple communication/discussion about HIV, attitudes towards HIV-infected people, HIV stage, access to treatment, impact of HIV on reproductive choices, prevention of mother-to-child transmission and support from the family and the community.

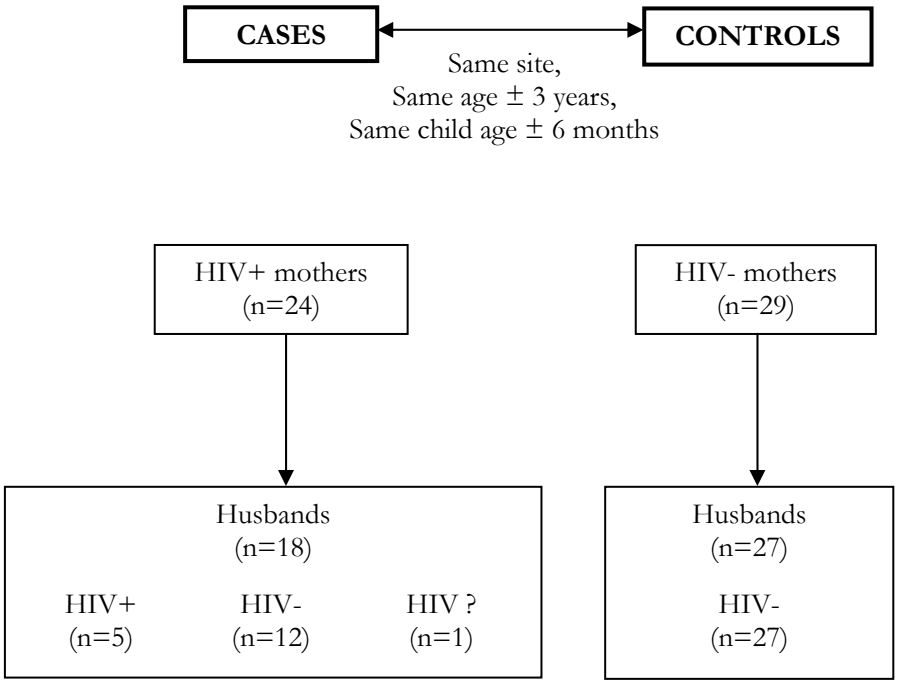
4.3. Analysis of data

The basic dimension of life-event analysis is **time,** and the sequence in which the various events occur. Various statistical softwares can be used to run an event-history analysis such as SAS, SPSS or STATA. To date, only preliminary univariate analysis had been performed using SPSS version 11.0. The multivariate/survival analysis

taking into account time-periods is ongoing, but the results are not yet available.

5. Preliminary results

A total of 98 respondents (45 couples and 8 individual persons) were interviewed. They were 53 women and 45 men. Eighteen respondents were interviewed in the rural site and 80 were recruited from the well-baby clinic of the Maternal and Child Health hospital. In terms of HIV serostatus, 29 individuals (5 men and 24 women) were HIV positive, 68 individuals (39 men and 29 women) were HIV negative and one man was of unknown HIV status. Women were our index cases of interest, so we defined cases as women living with HIV and controls as women living without HIV. Our study population therefore includes 24 cases (HIV-infected women) and 29 controls (HIV-non-infected women) and 18 cases' husbands (5 HIV-infected men, 12 HIV non-infected men and one of unknown HIV status) and 27 controls' husbands (all HIV non-infected men).



5.1. The life-event interview process

The calendar questionnaire greatly helped the respondents remember/situate their life-events relative to others. The respondents were able to grade their happiness during different periods of their lives, and date/describe the most important life crises they have been through. Interestingly, HIV/AIDS was mentioned only one time as a life crisis.

Some respondents were very emotional when recalling harsh/sensitive life events, such as economic hardship, domestic violence, HIV infection, or when speaking about their future or the future of their children. The interviewers who had been trained in psychotherapy and HIV/AIDS counseling were able to handle the situation, but referral for social/psychological support needs to be organized in such a context.

Overall, respondents found the interview interesting. The interaction with the interviewer was of high quality, close to a one-to-one conversation and more flexible than a formal questionnaire. The respondents were able to deny responding to the questions that they were not feeling comfortable to answer to. Compared to the in-depth interviews, the life-event interviews provided the same detailed information in a shorter time and appeared to be much more straightforward and more accurate in sequencing and dating of major life events.

5.2. Issues related to poverty

We were able to evaluate the financial status of the respondents, through a set of indicators, such as their current income, the persons with whom they had to share it, their assets such as land, house, car, motorcycle, etc., and the amount of loan/debt they had and the difficulties they would face in paying them back. In addition, we asked the respondents to grade their financial situation throughout their life course, using the same grading system as for happiness. Finally, the respondents were asked about possible financial crisis in their lives. One difficulty we faced, however, for couples living in the rural area, was that they often provided the overall household income instead of differentiating each partner's income. A global financial status/poverty indicator needs to be build.

5.3. Issues with regard to reproductive life and HIV

Respondents could speak without difficulty about their sexual and reproductive history, in particular the circumstances of their first intercourse (with whom, condom use). Contraceptive history was recorded for women only, because men were not able to remember it. Respondents did not appear to show any embarrassment when asked about their own/their partner's visits to commercial sex workers and responses were quite concordant within couples. Respondents could talk frankly about domestic violence and responses were also quite concordant within couples.

With regard to HIV, the life-event history approach allowed most of the cases to determine the period of time they acquired HIV infection. The answer, "I was infected through my first husband who died of AIDS later on", for example, could easily be translated into a period of time with a reasonable approximation. This was not possible, however, for men since most of them had been contaminated while visiting commercial sex workers. Respondents, both men and women, were able to date their HIV tests because the tests were usually linked with other life-events such as a pregnancy, a new job, or a hospitalization.

5.4. Issues about network support

The network support was explored from several points of view. First, the strength of the relationship with the parents (if alive) was assessed through the frequency of visits in case they were not living in the same house as them. The size of the family network was determined by the number of family members listed to have lived with the respondent throughout his/her life. Also, we asked if some family members were helping taking care of the child and who would take the responsibility of the child in case of orphanhood. The solidarity network outside of the family was assessed through an affiliation to some support/religious groups only for HIV infected individuals. The emotional support could be assessed through the HIV diagnosis disclosure process: how long did the respondents keep their HIV status secret and to whom did they disclose it? Other issues such as self-esteem, negotiation skills, or power relations could not be explored.

5.5. Issues about couple interviews

We noticed that couple counseling was very well established in Thailand. Among the couples interviewed at the Maternal and Child Health Hospital, all women had been counseled and tested for HIV, mostly during their antenatal visits, and only one husband had not been tested for HIV. Most of the women and men were aware of their partner's HIV status.

All cases approached agreed to be interviewed, however, for controls, about half of the couples declined participation, mostly because they were not expecting to stay at the clinic for an extended period of time. The median interview duration was 45 minutes (range from 20 minutes to 1 hour 45 minutes). Interview duration was longer for cases (median: 1 hour) than for controls (median: 35 minutes) due to more complicated lives. Since both partners were interviewed sequentially while the other was free to take care of the child, the overall time of the interview of the couples was unacceptably long.

Even if the respondents knew that their own life histories had not been revealed to their partners, some of them were worried about confidentiality. After the interviews, both partners were coming back home together, each of them knowing that they had disclosed sensitive events of their lives. The possibility of adverse consequences of these interviews on the couple interaction such as subsequent physical violence cannot be ruled out.

Moreover our assumption that we will learn about the women's risk of HIV through their husband life-event history was not verified since most women had been infected during a previous union and not by the current partner who was interviewed.

Therefore, since the assessment of the concordance of responses within couples was not the main objective of our survey, we believe that life-event history of couples may not be appropriate. Thus, in the next phase of the study, on one hand, mothers – HIV-infected and non-infected – will be interviewed, and on another hand, fathers – HIV-infected and non-infected – will be appointed for a separate interview, completely independently. Then, the unit of analysis, will be individuals and not couples.

6. Preliminary descriptive results

We are providing some descriptive results from our pilot survey. Caution should be taken in interpreting these results. Because of its small size and of possible selection bias in the sampling procedure, our study population is not representative of the general population of HIV-infected women and their husbands in Thailand. However, the differences observed between cases and controls, men and women, are consistent with our knowledge about the HIV epidemiology, and confirm that our approach is relevant.

Table 1
Overall characteristics of the study population

	All respondents	
	N = 98	Range
Median age (years)	29	17 - 46
Mean number of spouses	1.6	1 - 8
Mean number of separations	0.5	0 - 7
Mean number of children	1.4	1 - 3
Median number of residences	3.4	1 - 11
Median income (Bahts)	4,000	300 - 30,000
Median amount of loans (Bahts)	50,000	300 - 700,000
Mean number of life crises[a]	1.4	0 - 6
Median age at first sex (years)	18.0	13 - 32
Median age at first HIV test (years)	26.0	15 - 44
Median age at HIV infection (years)[b]	23.0	15 - 31
	%	95% confidence interval
History of parents' death	39%	29% - 49%
History of siblings' death	20%	13% - 30%
History of parents' separation	22%	15% - 32%
History of spouse's death	13%	7% - 21%
History of domestic violence	29%	20% - 39%
History of child death	3%	1% - 9%
History of abortion	8%	4% - 15%

a. Any significant crisis such as love, financial, family, health, death, or work-related crises.
b. Based on 26 HIV-infected individuals.

As shown in Table 1, the study population was composed of young adults (median age 29), living in couples, with a mean number of 1.4 children. Thirty nine percent of them had already lost at least one of their parents and 20% had lost one of their siblings. Twenty two percent of their parents had divorced. Most couples were poor with a median income of 4,000 Bahts per month (US $100), with half of the population earning less than the minimal monthly wage. Thirty two percent of the respondents thought their income was not sufficient. The median amount of loan was 50,000 Bahts (US$ 1,250) and 61% of the respondents said it would be difficult or very difficult for them to reimburse it.

The prevalence of physical violence in any union was 29%, which is in agreement with the prevalence obtained from a recent population based survey (Archawanitkul *et al.*, 2003). Consistent with data on sexual behavior in Thailand, the median age at first sex was 18 years in both sexes. Eight percent of women have had an abortion although it is illegal in Thailand. Overall, 28% of the respondents said that they discuss about HIV with their spouse at least once a month, 50% at least once a year, and 27% never. Interestingly, the concordance of response within couple about the frequency of discussion was poor (data not shown).

Table 2 compares the respondent's socio-demographic characteristics between cases and controls and between their husbands. The median age of the cases and the controls as well as the age of their husbands were not statistically different. As expected, husbands were older than women. Except for the number of life crises which was significantly higher in cases than in controls, cases and controls did not differ for most of the basic socio-demographic variables. More differences were seen between husbands. Husbands of cases had a significantly higher number of residence changes than husbands of controls ($p = 0.051$), which probably reflects their increased instability in life. The fact that the husbands of the cases had a significantly lower amount of loan than the husbands of the controls ($p = 0.051$) is probably due to the fact that currently, most of the banks in Thailand only provide loans after HIV testing and HIV-infected individuals are not eligible. Finally, the husbands of the cases tended to have a lower education level than the husbands of the controls ($p = 0.066$).

Table 2
Socio-demographic characteristics of respondents according to their type (cases or controls and their sex)

	Women				Husbands			
	Cases		Controls		Cases		Controls	
Total number	24		29		18[a]		27[b]	
Median age (years)	28.0		29.0		32.0		30.5	
Median number of residences	3		2		4		3*	
Median monthly income (baht)	2,220		3,000		4,400		5,000	
Median amount of loan (baht)	4,500		17,000		2,500		50,000*	
Median number of life crises	2		1**		1		1	
Median number of health crises	0		0		1		0	
	N	%	N	%	N	%	N	%
HIV positive	24	100%	0	0%	5	28%	0	0%
Age distribution								
up to 24	5	21%	7	24%	2	11%	3	11%
25-29	11	46%	10	34%	4	22%	8	30%
30+	8	33%	12	41%	12	67%	16	59%
Level of education								
Up to primary	11	46%	13	45%	10	56%	6	22%*
Secondary	5	21%	11	38%	3	17%	10	37%
Higher than secondary	8	33%	5	17%	5	28%	11	41%

a, b. Five out of 18 husbands of the cases (28%) were HIV positive, 12 (67%) were HIV negative, and 1 (6%) did not know HIV status.
Six cases were either separated or widow and their husbands therefore could not be interviewed. Two control's husbands refused to be interviewed.
* Significantly different, *P* value < 0.05. ** Significantly different, *P* value < 0.01.

Table 3
Events related to parents and siblings

	Women				Husbands			
	Cases		Controls		Cases		Controls	
Total number	24		29		18		27	
Median number of siblings	3		3		4		3	
Mean number of siblings	2.9		3.7**		3.9		3.6	
	N	%	N	%	N	%	N	%
History of parents' death	9	37%	12	41%	7	39%	10	37%
History of parents' separation	8	33%	5	17%	4	22%	5	18%
Parents still living together	11	65%	14	66%	13	72%	18	75%
History of siblings' death	4	17%	6	21%	4	22%	6	22%

* Significantly different, *P* value < 0.05.
** Significantly different, *P* value < 0.01.

Table 4
Circumstances of first sexual relationship and first union

	Women				Husbands			
	Cases		Controls		Cases		Controls	
Total number	24		29		18		27	
Median age at 1st sex (years)	18.0		19.0		18.0		17.5	
Median bride price for 1st marriage (bath)	6,000		20,000		6,750		10,000	
	N	%	N	%	N	%	N	%
First sex partner								
Spouse/future spouse	17	71%	28	97%**	5	28%	6	23%
Other (eg. boyfriend, friend, others)	7	29%	1	3%	13	72%	20	77%
Use any method to prevent STD/pregnancy at 1st sex								
yes	12	50%	13	45%	2	12%	12	46%**
no	12	50%	16	55%	15	88%	14	54%
Circumstances meeting 1st spouse								
Leisure place	1	4%	4	14%	1	6%	1	15%
Not leisure place	23	96%	25	86%	17	94%	17	85%
First marriage involved bride price	13	54%	20	69%	10	61%	14	70%

* Significantly different, *P* value < 0.05.
** Significantly different, *P* value < 0.01.

Table 5. — Events related to spouse(s) and children

	Women				Husbands			
	Cases		Controls		Cases		Controls	
Total number	24		29		18		27	
Median number of lifetime spouses	2		1**		2		1**	
Mean number of lifetime spouses	1.8		1.2**		2.7		1.2**	
Median number of separations	0.5		0**		1		0*	
	N	%	N	%	N	%	N	%
Distribution of the number of lifetime spouses								
1	8	33%	23	79%**	6	33%	22	81%*
2	13	54%	6	21%	6	33%	5	19%
3-8	3	13%	0	0%	6	33%	0	0%
Reasons for separation[a]								
Spouse had other partner	4	17%	2	7%	6	33%	1	3%**
Husband/Self had sex with CSW[b]								
Before living with respondent	17	71%	14	48%	13	72%	15	56%
While living with respondent	11	46%	4	14%**	5	28%	5	18%
History of spouse's death	9	37%	2	7%**	2	11%	0	0%
Ever experienced physical violence with spouse	10	42%	7	24%	5	28%	7	26%
Ever experienced sexual violence with spouse	5	21%	4	14%	1	6%	2	7%

a. Other reasons include problems related to sexual relationship, money, cannot get along, lack responsibility, and alcoholism/gambling.
b. Women were asked if they think that their husbands visited commercial sex workers before living with them and while living with them. Husbands were asked if they visited commercial sex workers before living with their wives and while living with them.
* Significantly different, *P* value < 0.05. ** Significantly different, *P* value < 0.01.

Table 6
Events related to HIV infection and HIV test

	Women				Husbands			
	Cases		Controls		Cases		Controls	
Total number	24		29		18		27	
Median age at first HIV test	26.0		24.0		28.5		26.0	
Median age at HIV infection[a]	23.0							
	N	%	N	%	N	%	N	%
Ever had HIV blood test	24	100%	28	97%	18	100%	21	81%*
Reasons for having HIV blood test								
Premarital or antenatal testing	18	75%	22	79%	8	50%	14	64%
Health problem	2	8%	0	0%	2	12%	0	0%
Voluntary testing	3	12%	1	4%	2	13%	3	14%
Other (school/work or other)	1	4%	5	18%	4	25%	5	22%

a. Very few men were able to date their HIV contamination.
* Significantly different, *P* value < 0.05.
** Significantly different, *P* value < 0.01.

Table 3 compares the family events related to parents and siblings. Except the mean number of siblings which was significantly higher for controls than for cases (p=0.006), all other variables such as history of parents' death, parents' separation or siblings' death did not differ significantly. Overall family disruption during childhood will be compared in further analysis.

Table 4 compares the circumstances of the first sexual relationship and of the first union. Although the median age at first sex did not differ, the first sex partner was significantly less often the husband or the future husband for cases than for controls (p=0.009). Also, husbands of cases were less likely to use condom at first sex than husbands of controls (p=0.01). The median amount of bride price tends to be lower for the cases and their husbands but the difference was not statistically significant. Similarly, the percentage of first union involving a bride price tends to be lower for cases compared to controls. Bride prices are probably a good indicator of the strength of the unions through the involvement of the families and their willingness to follow the Thai tradition.

Table 5 compares the marital life of the respondents. The mean and median number of spouses was significantly higher for the cases than for the controls (p = 0.002), and the same was true for their husbands (p = 0.03). The distribution of lifetime spouses was also significantly different between cases and controls (p = 0.002). The number of separations was therefore obviously higher for the cases than for the controls. Husbands of cases were significantly more likely to have sex with commercial sex partners while living with the respondent than controls (p = 0.01), and the trend was the same (although not statistically significant) before marriage. This may relate either to a more risky sexual life or to sex outside the union because the current partner was HIV positive. History of spouse death was obviously significantly more frequent in cases than in controls because of AIDS-related deaths (p = 0.006). Although physical violence and sexual violence were more frequent in cases than in controls, the difference was not statistically significant.

Table 6 presents the data related to HIV infection and HIV testing. The median age for first HIV testing did not differ between cases and controls. The median age at contamination was 23 years old in the cases. It could not be calculated for their husbands because only three of them were able to date their infection. The circumstances of HIV

testing did not differ between cases and controls, most of them being tested during pregnancy. Finally, 85% of the cases and of their husbands had disclosed their HIV-status. The mean duration before disclosure to any one was 3.6 months for cases (1 day to 2 years) while it was 9.5 months for their husbands (1 day to 7 years). The spouse was the person who was disclosed the HIV status first. Finally, in terms of network, HIV seemed to have a positive impact on opening up the individual's network outside the family, in particular into the community.

7. Conclusion: Learning from the test

The life-event history approach is particularly appropriate to study vulnerability and network support in the context of HIV infection. It allows exploring, in one very comprehensive quantitative survey, several relevant and interactive issues such as family disruption, marital life, domestic violence, education, occupation, mobility, poverty, reproductive health and health history, and their possible association with HIV infection. In-depth interviews, although providing the same information, would be much more time consuming, would provide less accurate data, and would be very difficult to analyze.

The case-control approach is also necessary. Indeed, in the absence of a control group, hasty conclusions could have been drawn with regards to vulnerability. For example, the prevalence of family disruptions such as parents' separation or death, which could be considered as a vulnerability factor, is not significantly different in cases and in controls. Therefore only a careful comparison with appropriate controls allows to draw any conclusions.

The results from our preliminary analysis should be considered with caution and can not be generalized. They already point out some indicators of vulnerability to HIV, such as higher mobility, lower education level, complicated marital life, sex debut with partners other than the spouse, and absence of condom use at first sex. These factors should be considered as indicators of "vulnerable personality profiles", but their translation into prevention policy may be difficult.

In terms of solidarity networks, as family links loosen with HIV disclosure, HIV-infected individuals extend their network outside of the family to get support from the community. The role of these sup-

port groups is clearly major and needs to be strengthened in the prospect of access to antiretroviral treatments.

A larger survey will be performed using the same methodology on a sample of 200 HIV-infected mothers and 200 controls, selected in well-baby clinics when their children are between 6 and 12 months of age. HIV-infected husbands will not be interviewed because of logistical issues and potential for couple disruption. A sample of 100 HIV-infected fathers and 100 HIV-uninfected fathers (not necessarily husbands of the female respondents), also selected at the well-baby clinics, will be interviewed instead. Comparative studies using the same approach in different contexts/countries/continents should be envisioned.

References

ARCHAWANITKUL, K., C. KANCHANACHITRA, W. IM-EM and U. LERDSRISANTHAT (2003), *Partner Violence Against Women and Women's Health: Results of the WHO Multi-Country Study on Domestic Violence*, IPSR Publication, Mahidol University, Thailand (in Thai language).

BEYRER, C., D. D. CELENTANO, S. SUPRASERT, W. SITTITRAI, K. E. NELSON, B. KONGSUB, V. GO and P. PHANUPAK (1997), "Widely varying HIV prevalence and risk behaviours among the ethnic minority peoples of northern Thailand", *AIDS Care*, vol. 9, p. 427-439.

COURGEAU, D., and É. LELIEVRE (1989), *Analyse démographique des biographies*, Manuel de l'INED, Paris, PUF.

COURGEAU, D., and É. LEVIEVRE (1996), "Changement de paradigme en démographie", *Population*, no. 3, p. 645-654.

HANENBERT, R. S., *et al.* (1994), "Impact of Thailand's control programme as indicated by the decline in sexually transmitted diseases", *The Lancet*, no. 344, p. 243-245.

KNODEL, J., C. SAENGTIENCHAI, W. IM-EM and M. VANLANDINGHAM (2000), "The impact of AIDS on parents and families in Thailand: A key informant approach", *Research on Aging*, vol. 23, no. 6, p. 663-670.

MANTON, K. G., B. SINGER and M. A. WOODBURY (1992), "Some issues in the quantitative characterization of heterogeneous populations", in: J. Trussell, R. Hankinson and J. Tilton, eds., *Demographic Applications of Event History Analysis*, Clarendon Press, p. 8-38.

MINISTRY OF PUBLIC HEALTH, Thailand, Division of Epidemiology (2002), *Sentinel Serosurveillance*, June.

NAGACHINTA, T., A. DUERR, V. SURIYANON *et al.* (1997), "Risk factors for HIV-1 transmission from HIV-seropositive male blood donors to their regular female sex partners in northern Thailand", *AIDS*, vol. 11, p. 1765-1772.

NELSON, K. E., D. CELENTANO, S. SUPRASERT *et al.* (1993), "Risk factors for human immunodeficiency virus infection in young men in northern Thailand", *JAMA*, no. 270, p. 955-960.

NELSON, K. E., *et al.* (1996), "Changes in sexual behavior and a decline in HIV infection among young men in Thailand", *New England Journal of Medicine*, no. 335, p. 297-303.

SITTITRAI, W., P. PHANAPHAK, J. BARRY and T. BROWN (1992), *Thai Sexual Behavior and Risk of HIV Infection*, Bangkok, Institute of Population Studies/Thai Red Cross Society Program on AIDS.

SURASIENGSUNK, S., S. KIRANANDANA, K. WONGBOONSIN, G. P. GARNETT, R. M. ANDERSON and G. J. VAN GRIENSVEN (1998), "Demographic impact of the HIV epidemic in Thailand", *AIDS*, vol. 12, no. 7, p. 775-784.

WENIGER, B. G., *et al.* (1991), "The epidemiology of HIV infection and AIDS in Thailand", *AIDS*, vol. 5, suppl. 2, p. S71-S85.

WORLD BANK (2000), *Thailand's Response to AIDS: Building on Success, Confronting the Future*.

Part II

CHALLENGES IN REPRODUCTIVE HEALTH NEEDS

3

RETHINKING THE MEANING AND SCOPE OF WOMEN'S "UNMET NEEDS": THEORETICAL AND METHODOLOGICAL CONSIDERATIONS AND UNCERTAINTIES ON EMPIRICAL EVIDENCE IN RURAL MEXICO

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1. Introduction: The locus of the problem

The last twenty-five years of the 20th century were characterized by the presence of intense debates and the confrontation of approaches and cosmovisions regarding both the interactions and interventions in the field of human reproduction and health, and in the research undertaken in this field. In both issues, efforts by some researchers have focussed on redefining,

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modifying and expanding the programmatic and strategic frameworks as well as the conceptual and methodological schemes used. There has been a shift from the narrow, hegemonic paradigm of "population-driven forces" prevalent in the 1970s and 1980s that focussed on reducing population growth, primarily through fertility control, to the more comprehensive "human rights- and gender equity-driven forces" referring to the population's sexuality and reproductive health (Balán, 1999; Cervantes, 1999; Lerner and Szasz, 2000; Mundigo, 1999; and Satia, 1999).

Underlying these approaches is a deep-seated tension over societal, national or public goals, interests, concerns and needs versus individual, private and intimate ones. The former is the dominant perspective under the population-driven approach, the latter being one of the central premises underpinning the reproductive health approach. The concern for individuals' needs – women's or couple's needs – at the International Conference on Population and Development (ICPD, held in Cairo in 1994) stressed the interaction between reproductive rights and choices and individuals' control over their reproductive life as key elements in the physical, emotional and economic wellbeing of the population. The Programme of Action endorsed at this Conference stated:

> "Reproductive Health (RH) ... implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when, and how often to do so" (United Nations, 1994, p. 7.2).

Nevertheless, it is important to recognize that the concern for women's needs for family planning, the control of their bodies and their reproductive capacity, was one of the main banners of the first women's movements in the early 20th century (Gordon, 1977). Furthermore, for a long time, the acknowledgement of women's reproductive and sexual self-determination, as part of their sexual and reproductive health needs and of their human rights, has been one of the main demands of women's health and rights advocates (Cook, 1995; Correa and Petchesky, 1994; Costa, 2000; Dixon-Mueller and Germain, 1993; Sinding, 1993; Tuirán, 1988; Zurayk, 1999).

The origin and further development of the concept of "unmet needs" is regarded as part of these paradigms and has been extensively used from diverse perspectives and for different objectives. Various authors have advocated a criticism and evaluation of its meaning, significance and scope, pointing out the conceptual assumptions, biases and limitations in the way surveys define and measure it (Casterline et al., 1996; DeGraff and De Silva,

1996; Dixon-Mueller and Germain, 1992; Bongaarts and Bruce, 1995; Westoff and Bankole, 1995 and 1996, among many others). Anthropological or qualitative studies, or a combination of these with statistical approaches, have also served to discuss these limitations and their results have enriched the analysis of this problem (e.g. Visaria, 1997; Yinger, 1998).

Other efforts related to the RH approach have focussed on demonstrating the importance of linking this concept to other dimensions such as human rights, particularly women's reproductive rights and gender inequities and inequalities, suggesting extremely important, thought-provoking proposals of a theoretical and methodological nature that reflect the potentialities and richness of the concept, in which the individual's needs are the central focus (Dixon-Mueller, 1999; Dixon-Mueller and Germain, 1993; Visaria, 1997). Nevertheless, the comparison between unmet needs as defined by women themselves and those identified by programs and interventions would appear to be the most important underlying sphere of debate and confrontation at both the theoretical and methodological, and the political and ideological level. The conceptual schemes developed to explain the changes in the various spheres of reproductive behavior (the concept of unmet needs among them), the production of data and the interventions by governments, civil organizations or specific power groups, are not divorced from theoretical, political and ideological positions and should therefore be addressed as part of a previously defined and structured theoretical problematic.

One can infer from the above that the history of the concept of unmet needs points out to the need for a profound criticism of its theoretical and methodological assumptions used in research, its operational definition, the significance and scope of the empirical evidence resulting from various surveys, as well as for its instrumental and programmatic purposes and interventions. Although this task exceeds the limits of this text, its contents seek to contribute to this line, and should be considered as a preliminary and exploratory stage of the work to be done.

This paper begins with a brief, schematic account of certain initial thoughts on the main questionings of the concept of unmet needs in light of the two paradigms mentioned earlier: a) the conventional one underlying the anti-natalist position, the population approach, oriented mainly towards the expansion of contraceptive coverage to reduce fertility, in which population's needs are basically defined in terms of the achievement of these objectives by State leaders, FP program directors and service providers, as well as by some academic researchers; in other words, as part of the public

realm, and b) the reproductive health approach that favours the individual's perspective and the private sphere and focuses on reproductive rights and gender inequality conditions. In other words, with a rationale based on individuals' needs, particularly those of women, which do not necessarily coincide with those derived from public interests. In this paper, both interpretations are drawn from the population studies field and from some of the contributions of feminist literature, as well as from the Mexican experience.

With these two paradigms in mind, and using data from a survey carried out in 1999 on Mexico's marginal rural contexts, where one of the health programs designed to attend this population operates, in the second part we seek to explore what we can learn about women's unmet needs in relation to their reproductive health. Despite the inherent limitations of the data from the survey, particularly as an instrument for gathering information on opinions, attitudes, preferences, intentions and assessments – subjective dimensions which are socially constructed and differentially internalized by the individuals –, the analysis of data on these aspects offers thought-provoking insights, provided, as Bourdieu says (1980) that one is aware and adopts a critical attitude to the information used.

Thus, unlike classical demographic analysis, which seeks large-scale behaviours, we have used an unconventional approach when analyzing the database. Using the logic of small but significant relative numbers, we look for empirical evidence in the interstices of data to illustrate some of the situations of greatest social vulnerability for women regarding the various components of their reproductive health[3]. It is an exploratory interpretation in process of which we will attempt to highlight the discrepancies, ambiguities and uncertainties in survey data regarding what is conventionally regarded as women's needs and, in some cases, health providers' opinion that intervene in and influence women's reproductive health[4]. Due to data available in the surveys analyzed, the main emphasis in this illustration is closely related to access to and quality of health services.

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3. As most of the surveys' data offer a very limited and homogenized view with respect to women's needs or unmet needs, due mainly to the predefined answers (or codes) to questions on subjective dimensions, we have recovered and examined the open answers given by women that are included under the so-called "Others" survey's code, to obtain a more comprehensive and perhaps a different, more accurate picture of them.

4. Data for health service providers taken from "Survey on Family Planning Institutions" (ENINPLAF) conducted by CONAPO-IMSS in 1996.

Finally, we conclude with a series of considerations that we suggest as subject for debate, which in the future will enable us to deal with alternative and complementary analytical strategies to enhance our understanding of how poverty and social vulnerability are related to women and men's needs and unmet needs in the reproductive health field.

2. The meaning of unmet needs from different perspectives

Dealing with the concept of "unmet needs" regarding the problematic sphere of human reproduction raises the following key questions: Needs for whom? Needs by whom? Needs for what RH components or with what objectives? Needs based on what assumptions? Who defines the main components to be considered and how are they defined? Under which prevailing material, cultural and ideological conditions, whether public or individual, are these needs being raised, confronted and solved or otherwise? With these questions in mind let us examine some of the various meanings and scopes of the concept of unmet needs and its limitations and potentialities, according to the two paradigms identified: the population-driven and the reproductive health approach.

2.1. Population-driven approach: unmet needs as a societal and public concern[5]

The population-driven perspective of the 1970s and 1980s is characterized by an anti-birth orientation in the sphere of reflection and research, as well as in debates and interventions. This orientation was part of the international and hegemonic debate over causal relations between population and development[6], with the first term of this binomial relation, population, becoming the central and almost virtually exclusive sphere for actions designed to regulate fertility. Some of the main aspects of this initial scenario include:

* *The birth control view as the hegemonic position* resulting from the international and national debate at both the theoretical and program-

5. A broader analysis of the two paradigms is available in Lerner and Szasz (2000).

6. We refer to the four World Population Conferences organized by the United Nations: Rome 1954, Belgrade 1965, Bucharest 1974 and Mexico 1984. Since the Belgrade Conference, but particularly after Bucharest, the debate on the need to design and implement population policies has been ever-present.

matic level, in which the unprecedented levels and rates of population growth in developing countries were viewed as an obstacle and threat to development. High fertility levels were regarded by developed countries as being the cause of slow economic growth rates, aside from their geopolitical concerns about the increase of south populations. The hypothetical rationale underlying the recommendations issued at the world population conferences assumed that the anti-natalist initiatives would reduce poverty in developing countries, thereby improving the population's living standards and reducing the gap between rich and poor nations.

* *The reductionist and bias feature of population policies,* which, although in theory covered the three basic components of population dynamics – fertility, mortality and migration –, in practice were oriented and limited, through the establishment of demographic goals, to reducing fertility levels. The gap between the rhetoric and practice of population policy, as well as its reductionist orientation, was also reflected in the conceptualization, design and operation of the Family Planning Promgrams (FPP).

* *Changes in the spheres of influence and intervention in fertility control* through a shift from the private, intimate sphere of the family and religious, moral and cultural norms, which prevailed virtually exclusively in the past to growing State intervention over the last three decades. This has been achieved through the design and implementation of public policies, mainly population policies, FPP, health services and a broad range of information, education and communication activities related to FPP, that assumed various shapes and forms and were mainly carried out by a variety of public institutions (Thomas and Grindle, 1994; Lerner and Quesnel, 1994).

* *The restricted central features that have characterized the initial modus operandi of FPP*: its orientation towards women of childbearing age with higher parity and the design and implementation of a unique programmatic model; that is, with a virtually total lack of consideration of the diversity of economic, social, cultural, institutional and ideological circumstances and barriers of the population that might limit their access to family planning services. Another distinctive feature is the exclusive responsibility granted to health institutions and their agents for the implementation of these programs, which led to the medicalization of procreation, without taking into account other social actors that intervene in and influence reproductive behaviour.

Thus it is hardly surprising that this perspective has led to the "segmentation of the population", by focusing exclusively on the unmet contraceptive needs of certain groups of women, excluding other groups in similar if not greater risk situations. Interventions targeted married women of childbearing age and those who did not use either modern or traditional contraceptive methods. At the beginning of FPP in Mexico, as in many developing countries, these policies included married (or in consensual union) women of an intermediate or advanced age (35 and over) and with high parity (3 and more children); namely the so-called "target women" who were not currently using a method of contraception, regardless of their reproductive preferences. Among them, emphasis was placed on those from the poorest, most marginalised sectors.

Moreover, it is neither surprising that the concept of unmet needs for contraception (UNFC) has become a central and relevant strategic policy tool for designing, justifying and implementing FPP, focussing its services on certain population groups and assessing the impact of these programs on population dynamics, particularly on changes in fertility. Nor it is surprising that this concept has been defined and interpreted on the basis of women who report that they are not practising contraception and at the same time express their desire to stop or delay childbearing, meaning that they are defined as being at risk of becoming pregnant[7]. As Dixon-Mueller and Germain so rightly point out (1992), this is a concept that is not defined by women themselves but one that is attributed to or imposed on them by researchers and those responsible for FP programs who deduce this from the apparent inconsistency between their contraceptive practices and their stated family preferences.

This explains the programmatic and operative nature of the UNFC concept and its doubly restrictive feature. The first of them, as

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7. This concept has its origins in the classic theoretical frameworks implemented during the first fertility surveys conducted in the 1960s (i.e., survey on rural and urban fertility in the case of Mexico and Latin America). These surveys compared the inconsistency between women's statements about their family-size ideals and preferences, their views on the advantages and disadvantages of a large or small family, or asked about the so-called KAP-gap for birth control. Their results were interpreted and regarded as indicative of women's unmet needs for contraception, although doubts were raised about its ambiguous meaning (Berelson, 1966; Berquó, 1979; Conning and De Jong, 1976; Patarra and De Oliveira, 1974; Westoff, 1988).

its name suggests, "***Unmet needs*** (only) ***for contraception***"[8] results from comparing the demand with the supply of FP services (number of potential users of contraception vis-à-vis current women users), and forms part of the components for estimating the material and human resources required to provide these services. Its rationale reflects the principal political concerns and those of various academic and social sectors that prioritise the policies and actions for increasing the use and effectiveness of modern contraceptive methods for regulating and controlling fertility as well as for improving women's access to contraceptive services. Therefore, their stated justification, as a public need, lies in the assumption of regarding universal contraceptive practice as the main (and often only) means for reducing fertility levels, counteracting the results of the high population increase and thereby achieving a greater common good (Sinding, 1993; Bongaarts and Bruce, 1995; Westoff and Bankole, 1996).

In keeping with this interpretation, some authors link the meaning of UNFC to the presence of lower or higher costs – not only material, but also social, psychological and health –, associated with knowledge, a favourable attitude, and contraceptive use, as opposed to a lack of knowledge, an unfavourable attitude and non-use of contraceptives. The conclusions on the subject are also predictable: the benefits of contraception for women – which are usually limited to preventing pregnancy –, are supposedly greater than the costs (consequences) of using contraceptive methods, mainly the modern ones, including sterilization. The opposite is true for women with unmet needs who are forced to bear extremely high costs (Easterlin, 1975; Bongaarts and Bruce, 1995). This analytical framework could also be related to the work done by some authors who seek to describe the risks derived from reproductive behaviour, although the majority of them continue to adopt a narrow, simplistic definition of risk circumscribed by the

8. The terms "unmet need for contraception" and "unmet need for family planning" tend to be used interchangeably in the literature, which is justified to the extent that FPP were virtually exclusively reduced to actions aimed at achieving greater contraceptive use. Nevertheless, the original concept of FP included other aspects. At the theoretical-discursive level, it refers to the free, informed decision by couples to limit the number of their offspring and opt for contraceptive methods, including the latter's right to practice FP voluntarily. In practice, however, these initiatives were reduced to expanding the contraceptive coverage of women under the responsibility of health service providers.

possibility of unplanned pregnancy for non-users of contraception. Studies showing the positive or harmful effects as well as the advantages or disadvantages of certain practices and interventions in contraception, procreative events and other reproductive matters, in relation to the conditions of both women's and men's physical and emotional health and wellbeing, provide a different perspective on the meaning of risk (Koblinsky and Nachbar, 1999). However, a great deal still remains to be done from a broader conceptual perspective regarding reproductive behaviour risks as a result of modern technological innovations, power relations and social control that influence this behaviour (as in the perspective developed by Beck, 1992).

The results of surveys undertaken in Mexico in the 1970s showed the existence of a need that was both felt and expressed by women with high parity who did not know of any methods for spacing or limiting pregnancies. The availability to meet this demand largely explains the effectiveness of the early stages of FPP[9] (Lerner and Quesnel, 1994), but also suggests that the deep-rooted tension over societal or public interest and needs versus private and individual ones, at least at the discursive and theoretical level, were quite similar. However, as mentioned below, the mechanisms, rationale and practices implemented by health services to achieve these goals at the programmatic and intervention level, did not always respond to the individual's interest, preferences and needs, regarding not only the use of contraceptive methods, but also their access to quality reproductive health services.

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9. In 1974, the Mexican Government passed a new Population Law redefining and implementing its current population policy; in 1977 it launched the first FPP at a national level. Prior to these initiatives, it is estimated that, in 1973, approximately 23% of the total number of married women used modern contraceptive methods, a figure that rose to 32% in 1979 as a result of the legalization of contraceptive use and the impact of FPP, to 41% in 1982 and 45% in 1987 (Camarena, 1991). It is estimated that by 1997, contraceptive use had risen to 73% in urban areas and to 54% in rural areas (CONAPO, 2000a).

2.2. Reproductive health approach: unmet need as an individual (women's) concern

The background to this perspective, which gave rise to the emergence of the concept of Reproductive Health (RH)[10], lay in the widespread, growing participation at the national and international level of women from civil society who challenged the orientation, justification and legitimisation of population policies and FPP (issues that have been widely documented in the literature; see for example Sen *et al.*, 1994; Mundigo, 1999). It is also found in the work of several researchers who pointed out the uncertainty regarding the success of these initiatives, given the perverse effects, whether intentional or otherwise, that were observed (i.e., Faría, 1988; Lerner and Quesnel, 1994). Furthermore, there are certain studies that underlined the need to analyse the consequences of the implementation of unfavourable economic and social policies such as the neo-liberal ones that resulted in the dramatic, growing impoverishment of the population and their reproductive health conditions as a key issue related to this approach (Lerner and Szasz, 2000).

Without underestimating the success of FPP – the rapid decline in fertility and the subsequent reduction of maternal and child mortality rates – there is an underlying simplism and fallacy in the justification and legitimisation of the rationale inherent in these interventions, which were regarded as central mechanisms in the reduction of the conditions of poverty of the majority of the population. Empirical evidence suggests the opposite, confirming one of the arguments put forward by various critics regarding the anti-birth-control position. Unless adequate social and economic development policies are implemented, and the population's felt needs and circumstances of life are taken into account, successful interventions in demographic dynamics will not lead to greater wellbeing among the population (Lerner and Quesnel, 2002; Sen *et al.*, 1994; Welti, 1998; Szasz and Lerner, 2002).

The debates and confrontation of approaches regarding State interventions to regulate fertility, include the following critical issues and perverse effects, whether intentional or otherwise.

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10. A concept initially defined by the World Health Organization (WHO) and adopted by the ICPD held in Cairo in 1994.

** The partial and questionable view of interventions in FPP and maternal and child health programs,* whose services focus almost entirely on the reproductive events most closely linked to procreation, such as pregnancy, childbirth, and to a lesser extent, the postnatal period. Moreover, and aside from its positive effects, these events – particularly childbirth and maternal and child health services – became spheres of intense State influence, in some (or many) cases of a coercive nature, for introducing modern contraceptive practices, particularly irreversible ones, and thereby controlling and reducing fertility levels.

** The initial exclusion from reproductive health care services of broad groups of the population,* such as teenagers, single women and mothers, women once but not currently married, infertile women or those who have been sterilized, women going through the menopause and men of all reproductive ages. This was compounded by the scant attention paid to reproductive health problems apart from those mentioned above.

** The questionable and unfavourable conditions and practices related to access to quality family planning services.* At least three issues, widely documented and debated in the literature, should be pointed out:

- The limited range of reversible contraceptive methods offered to women and above all, their lack of appropriateness for women's physical and emotional conditions and with their reproductive life cycles[11]. This has led to an expanded and almost exclusive supply of safe or permanent methods such as IUDs and above all, feminine sterilization[12], with frequent cases of mismanagement and misapplication by FP service providers.
- The high frequency of female sterilization and Caesarean sections, the latter frequently linked to female sterilization, is largely indicative of the logic imposed by health institutions to reduce fertility

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11. According to ENINPLAF data (1996) it is estimated that of the eight choices of traditional and modern methods managed by the official health institutions, including sterilization, only an average of 3.7 methods are available.

12. The type of method used by women in Mexico to regulate their fertility has changed radically over the past 25 years. During the initial stages of official FPP (1976), 36% of married women of childbearing age used the pill as a contraceptive, 23% utilized traditional methods, and 19% were fitted with IUDs. By 1997, use of the pill had dropped by one third while the use of traditional methods had halved. Conversely, feminine operation, accounting for 8.9% in 1976, had increased fivefold to 45%, becoming the most common method used, followed by IUDs in second place with 21% (Dirección General de Planificación Familiar, 1989; CONAPO, 1999).

levels[13]. This not only reflects professional malpractice, which can be interpreted as part of the material, social and cultural poverty of health institutions, but is also part of the social vulnerability to which women are exposed. It mainly affects women from the poorest socioeconomic strata, given the inadequate, insufficient and poor structure of options available to them in the reproductive health sphere which is not unrelated to other spheres such as education, food and work.

- The social, economic, cultural and work conditions of health institutions and their agents as well as the rationale imposed by these institutions, which in turn has repercussions on the unfavourable service environment for the interaction between suppliers and women users of reproductive health services. These problematic issues include, among others, achieving FP goals, particularly regarding the use of irreversible methods, the excessive workload, the short time available for consultations, the low salary levels of service providers and the frequent lack of both contraceptive methods and medical instruments. Likewise, the unequal power relations between users and providers, characterised by the imposition of health professionals' technical expertise, as well as the homogeneity of programs and interventions, together with their lack of fit with the specific demands of the diverse population groups, are just some of the factors that affect the interaction between these actors (Camarena, 1991; Cervantes, 1999; Gautier and Quesnel, 1993; Jasis, 2000; Lerner and Quesnel, 1994, 2002).

** The gender insensitive approach and the violation of women's reproductive and sexual rights,* as well as the failure to take into account women's (and men's) perceptions, needs and priorities in the sphere of health, reproduction and sexuality are some of the key issues extensively documented in the literature. This is compounded by the social inequality that exacerbates the already adverse conditions of vulnerability of the great majority of women (Dumbl, 1999; Figueroa, 1999; Kabeer, 1998; Petchesky, 1995; Sen *et al.*, 1994).

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13. According to estimates based on survey data, the rate of Caesarean sections for all urban areas in Mexico was 29% in 1995, with a range of variation from 20% to 42% (Cárdenas, 2000). Nationwide, the prevalence of this practice by the public sector is estimated at 24%, a figure that varies between 21% and 46% according to information provided by various health institutions (Foro Nacional de Mujeres y Políticas de Población, 1999).

This scenario of intense criticism was undoubtedly one of the crucial factors that led to the institutionalisation and legitimisation of the RH approach, after the Cairo Conference. In fact, this approach became the broadest field of reference for sociodemographic research as well as for the definition of actions at the international and national level, particularly in the following spheres.

– The field of human rights, which has seen a shift from the recognition of the right to FP to a broader range of women and men's sexual and reproductive rights.
– Health care, which has adopted a more comprehensive and in some cases more balanced view of the services (and the quality of the latter) required in the various components of sexuality and reproduction.
– The gender perspective, where efforts have been made to break away from the hierarchical conceptualisation of previous FPP. Emphasis is placed on the importance of empowering women and turning them into active subjects involved in decisions that are crucial to their own lives and those of their families. In other words, there is an explicit recognition of women's ability to make decisions and not merely to subject them to the spheres of family influence or to professional medical spheres that used to decide and, in some cases, continue to decide what the best options for them would be.
– Finally, in the realm of sexuality and risk practices related to individuals' health where, due to the rise and intensification of HIV/AIDS and STDs, health and education programmes have included awareness and preventive interventions, apart from health services attendance.

As part of this perspective, we would like to emphasize three aspects related to the meaning and scope of the concept of unmet needs, in light of the potentialities offered by the reproductive health approach. The purpose of this exercise is to identify lines of research that will use a more suitable and proxy analytical strategy for estimating the magnitude of and gaps in women's needs, not only for contraceptive information and services but also for other health components related to their reproductive lives.

As mentioned earlier, an initial aspect refers to the prevalence of a segmented orientation, which translates into the exclusion of the perceptions, needs and demands of large groups of women (and men) from FP and RH services. **Needs for whom? Needs by whom?** Un-

der the RH approach, these groups should include teenagers, single, separated, divorced or widowed women and mothers, those who live in unions that have not been formalised, those engaged in the sex trade and obviously men at various stages of their lives. But there are also others with unmet or unsatisfied needs or unsatisfied current users, amenorrheic, sterilized or infertile women as well as those going through the menopause. Although the levels of UNFC of these excluded groups are supposedly lower, they include large population groups[14] that are also in a possibly even greater state of vulnerability regarding their reproductive health conditions. Likewise, in order to reduce the tension between societal, national and public interests, concerns and needs, versus individual, private and intimate ones, it is essential to consider that these needs must be mainly defined by women and men themselves and not merely by researchers, service providers, policy makers or conservative groups.

A second consideration is linked to the unforeseen intentions concerning the means of identifying and delimiting the reproductive needs of the different population groups, in other words, **Needs for what?** Even if we restrict ourselves to the UNFC of these groups, they are obviously not necessarily the same for all the population groups; on the contrary, they vary according to their specific needs, living conditions, world views and the stage they are at in their reproductive lives. Among women classified (by a third party) as having unmet needs for contraception, do all of them really need contraceptive services? Do they really want to space or limit their offspring? Or more importantly, what type of contraceptive methods or FP services do they really need? What are the unmet needs of current users? Are all of them satisfied, correct and appropriate method users or on the contrary, are some or most of them dissatisfied, incorrect or inappropriate method users? What are the specific needs in this field for teenagers, single women and those who have had abortions or miscarriages? (Germain, 1993). Moreover, what are the unsatisfied needs of these groups of women in relation to other related reproductive health components, such as the

14. Given that surveys fail to record the unmet needs of these groups, the few estimates available for some of these groups show the immense proportion of women in this situation. For example, in the case of Peru, if one considers unmarried women (42%) plus married women who are users (46%), it is estimated that over two thirds of women of childbearing age are excluded from the consideration of their unmet needs (quoted by Dixon-Muller and Germain, 1992, p. 332).

prevention and treatment of infertility, RSTIs (Reproductive and Sexual Track Infections), HIV/AIDS, breast and cervical-uterine cancer?

As Dixon-Muller and Germain (1993) have pointed out, if the challenge is to meet the reproductive needs of men and women, there is also an urgent need to broaden the scope of unmet needs while taking into account the specific demands and conditions of the various population groups:

> "i) the needs among non-users who are at risk of an unwanted or untimely pregnancy for any method of contraception…; ii) the need among certain users for a more effective, satisfactory or safer method…; iii) the need among both users and non-users for the treatment of contraceptive failure, in other words, for safe, accessible abortion services to terminate untimely or unwanted pregnancies; and iv) the need for related reproductive services…" (p. 13).

A third aspect is related to the structural, institutional, *intersubjective* or personal circumstances required to respond to the needs and demands of individuals in the basic components of their reproductive health and lives. According to the approach adopted in Cairo, reproductive health involves considering the following aspects: i) that people are **able** to have a satisfying and **safe** sex life (which implies that individuals can have sexual relations **free from the fear** of unwanted pregnancies or sexually-transmitted diseases); ii) that they have the **ability** to reproduce and **the freedom** to decide if, when and how often to do so (which means that men and women have the right to be **informed** and to have **access to safe, effective, affordable and acceptable methods** of family planning **of their choice** for the regulation of their fertility, and which are **not against the law**); iii) that women will have **safe** pregnancies and childbirth, and iv) that the results of pregnancies will be successful for the survival and wellbeing of mother and child (implicit in these two conditions is the **right of access to appropriate (quality) health-care services**) (Barzelatto, 1994 and 1998; Fathalla, 1992; Ford Foundation, 1991; Sai and Nasim, 1989; Salles and Tuirán, 1995; UN, 1994)[15].

Even if this approach provides a more appropriate and realistic view of individuals' needs and demands in the basic components of

15. Despite their apparently simplistic meaning, the words in bold deserve a more explicit and solid interpretation, giving account of the required circumstances to acquire and exercise these attributes according to specific circumstances in each society, such as social and gender inequalities, power relations, etc.

their reproductive life, it also has significant implications and poses major, complex challenges for meeting those needs, both in the research strategies (theoretical and methodological ones) to be undertaken, and above all for translating their results into better public interventions in this field. From the above aspects involved in this concept certain research and strategic questions that are insufficiently assessed should be addressed: What are the main societal, economic, cultural and political barriers affecting women's or individuals' own ability or capacity to freely and safely opt for a sexual and reproductive life without unwanted pregnancies and sexually-transmitted diseases? What are women's personal circumstances in their partners' and family contexts, in their economic situation, in the restrictions imposed by the State, and by certain institutions or power groups that prevent or facilitate women's freedom to decide on and exercise their reproductive rights? What are the conditions, obstacles and rationale of health institutions and service providers that prevent or enable individuals to have access to safe, effective, affordable and suitable family planning methods of their choice and to exercise their right to access to quality health services? What is the availability and quality of health and family planning services for offering a wide and appropriate range of contraceptive services rather than suggesting or imposing those either available and/or regarded as being the safest and most effective? Finally, what is the role of state and health institutions in the reproductive health agenda that will lead to a reduction in the adverse situations of individuals in this field? Will the hegemonic model dominated by market forces, which has led to renewed attempts to relegate the responsibility for health prevention and attention to individuals, maintain if not increase social inequalities as well as health inequalities? What is the role of the other public institutions (educational, legal, etc.), and of organizations in civil society and academia and international organizations in this new scenario?

It is within this critical scenario, full of unanswered questions, different conceptual approaches and diverse nuances, interests and objectives, that we feel future theoretical and methodological research efforts should be oriented in order to have a better and more comprehensive view of women and men's unmet needs. For the time being, and despite all the survey-data limitations, it is our aim to illustrate, within this scenario, what can be learned about women's unmet needs regarding some of their health reproductive issues, based on a survey

undertaken on the most marginalised and vulnerable population in rural Mexico. In addition, some evidence based on health providers' opinions regarding their interventions is considered in order to show the influence they exert, according to their own rationale, on defining women's needs.

3. The meaning and scope of unmet needs in light of empirical evidence in marginalised contexts in Mexico

This overview concerns present-day Mexico, which has undergone a series of major transformations at the political, social, economic, demographic and cultural level. Suffice it to say that the successful FPP begun nearly thirty years ago has been accompanied by the development of a broad medical infrastructure since the mid-20th century, women's growing participation in the labour market, and the socialisation and legitimisation of new values, attitudes and practices in various spheres of social, familial and personal life, all of which have produced significant changes in reproductive patterns (CONAPO, 2001, 2002, 2000b, 1999). The country has also experienced a profound economic crisis resulting from the structural adjustment model adopted and above all, the persistence and increase of sharp social inequalities among the population, with the subsequent marginalisation of large sectors of society.

Our main interest in this second part is to show how in a country that has implemented a successful FPP and responded to women's demand for contraception, achieving high contraceptive coverage and a significant decrease in fertility levels, women still have unmet RH needs. Focusing on one of the extremely poor and marginal population groups living in rural areas in Mexico in 1999, we search for empirical evidence that might indicate who the women with unmet needs are, what their RH needs are and what some of the barriers and obstacles, whether public or individual, are that hinder the satisfaction of their needs in this field. This is a preliminary exploration based on survey data which, despite its conceptual and methodological limitations, allow us to illustrate and partly answer these questions, in some cases through the very uncertainties that arise from the facts and figures in some of the RH components drawn from the evidence considered.

3.1. Sociodemographic characteristics of the population

The Reproductive Health Survey was conducted in 1999 to gauge the impact of the actions carried out by the IMSS-Solidarity Program that began operating five years prior to the survey. The population under study includes 2,733 women aged 15-49 living in 160 rural communities in eight out of the thirty-two States in Mexico. The women interviewed live either in localities where the IMSS-Solidarity rural medical units operate or in villages that are the object of intensive action by the same program, through mobile medical units and health agents who periodically provide their services in these localities (51% and 49%, respectively; 60% of the latter have these services once a month). The largest sector of the population interviewed is non-indigenous (81%), the remainder being indigenous (defined according to the language they speak). Both are distributed in a similar fashion among localities with medical units and those with intensive action, 74% of the latter are localities with less than 1,000 inhabitants as opposed to 36% of the former (see Table 1). This population's marginalisation is also reflected by the low level of education attained, where half of the women have not completed elementary school or have not had any schooling at all, although there has been a significant improvement among the younger generations. The sharpest inequalities are to be found between indigenous and non-indigenous women (75% and 44% respectively have not completed elementary school).

With regard to the fertility conditions that characterise the population under study, the following main features should be mentioned (Table 1). The first refers to the almost universal practice of conjugal union among the women interviewed, as well as the persistent practice of early age at marriage: 96% of women aged 35-49 and 46% of those aged 15-24 had been ever married. Regarding their age at first union, data show a median age of 18.8 years, with a slight increase of nearly a year both between the youngest cohort and non-indigenous and the oldest cohort and indigenous women, while age at first union among women with greater educational attainment is three years higher than for those without schooling. The second feature addresses the differences observed in women's fertility behaviour by ethnic status, with a higher proportion of indigenous women with high parity (37% of indigenous women as opposed to 23% of non-indigenous ones with five or more children). This fact may be due to a combination of factors,

such as the different pattern in their fertility calendar and the impact of family planning actions on the indigenous and non-indigenous population[16]. The third is the continuation of a young pattern regarding age at birth of first child among the cohorts (with a mean age of 20.2). On average, half of all the women interviewed had their first child 1.4 years after their first union. Finally, the fourth and last aspect refers to the evidence on children's survival that suggests a much higher infant and general mortality rate in the marginal rural areas considered by the survey in comparison with the rest of the country[17]. Nearly one out of five women of childbearing age that have had borne live children have experienced the death of at least one child, ranging from 7% of young women aged 15 to 24 to 29% among those aged 35 to 49 (Table 4).

Although we are aware of the risks involved in the analytical strategy of the "small numbers" we have used and of the possible statistical non-significance of some of the inferences made, we would like to stress, once again, that our aim is to highlight the existence of cases that diverge from the average or apparently common behaviours and situations, as well as of the discrepancies, ambiguities and uncertainties revealed by survey data in order to show some women's RH needs and unmet needs that warrant further attention in both research and the programmatic and intervention field. Moreover, as mentioned below, we should not underestimate the fact that the small relative numbers may represent a significant numerical number when assessing the country's entire population living under similar or worse conditions (see note 19).

3.2. The versatility estimates of unmet needs for contraception: Needs for whom? Needs by whom?

One of the first issues to be dealt with concerns the self-definition of women's contraceptive needs: Whose needs? Needs for whom? Needs by whom?. The criteria used for defining them have changed

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16. In order to contextualize fertility level in marginal rural areas, in 1996 the TFR for all Mexican rural areas was 3.5 as opposed to 2.3 for urban ones (CONAPO, 2001). The figure for marginalized women under study is 3.9.

17. Nationwide, in 1997, an average of 9.1% of women in reproductive age with live-born children had experienced the death of at least one child, a figure that rises to 15.1% for rural women (estimates based on ENADID 97). The corresponding one for marginalized rural women in 1996 is 19.6% (see Table 4).

Table 1
Sociodemographic characteristics of the survey population

	Total	Ethnicity		Education			Locality size		PRO-GRESA		Age			Parity				Locality type	
		Indigenous	Non-indigenous	None	Incomplete primary	Complete primary or +	< 1,000 inhabitants	1,000 inhab. or +	Yes	No	15-24	25-34	35-49	zero	1-2	3-4	5 or +	With medical clinic	Intensive action
Indigenous	18.8			50.9	16.1	9.5	17.2	21.3	25.2	14.8	14.4	20.4	22.6	11.4	16.7	20.4	27.3	18.4	19.2
Non-indigenous	81.2			49.1	83.9	90.5	82.8	78.7	74.8	85.2	85.6	79.6	77.4	88.6	83.3	79.6	72.7	81.6	80.8
Educational attainment																			
No schooling	17.4	47.1	10.5				16.4	19.0	22.5	14.2	8.6	17.1	28.4	6.7	11.3	18.2	34.0	17.2	17.6
Incompl. primary	32.2	27.5	33.3				35.7	28.4	35.2	30.4	21.0	32.2	45.9	18.7	27.7	36.4	47.3	28.6	36.1
Compl. prim. or +	50.4	25.4	56.2				47.9	52.7	42.3	55.3	70.4	50.6	25.7	74.6	61.0	45.3	18.7	54.2	46.3
Size of locality																			
<1,000 inhab.	54.2	48.9	55.5	50.6	59.8	51.8			53.2	55.0	55.5	55.3	51.6	54.6	52.0	53.3	56.6	36.4	74.0
1,000-5,000 inhab.	45.8	51.1	44.5	49.4	40.2	48.2			46.8	45.0	44.5	44.7	48.4	45.4	48.0	46.7	43.4	63.6	26.0
Benefits from PROGRESA																			
Yes	38.7	51.7	35.7	49.9	42.2	32.5	38.4	40.2			36.8	37.9	41.8	32.1	33.1	39.1	50.7	35.9	41.7
No	61.3	48.3	64.3	50.1	57.8	67.5	61.6	59.8			63.2	62.1	58.2	67.9	66.9	60.9	49.3	64.1	58.3
Age																			
15-24	38.0	29.2	40.1	18.7	24.8	53.1	38.9	37.0	36.2	39.3				83.4	49.3	12.9	0.4	38.3	37.7
25-34	30.9	33.5	30.3	30.5	31.0	31.1	31.5	30.2	30.3	31.3				10.8	35.1	54.0	28.4	30.4	31.5
35-49	31.1	37.3	29.6	50.8	44.2	15.8	29.6	32.8	33.5	29.4				5.8	15.6	33.1	71.2	31.3	30.8

Mean age	*29.1*	*30.8*	*28.7*	*33.9*	*32.3*	*25.3*	*28.9*	*29.3*	*29.3*	*28.9*	*19.2*	*29.4*	*40.8*	*20.5*	*26.6*	*32.0*	*38.2*	*29.1*	*29.0*
Parity																			
Zero	28.0	16.9	30.5	10.8	16.2	41.4	28.1	27.6	23.2	31.0	61.3	9.7	5.2					29.1	26.8
1-2	23.6	21.0	24.2	15.3	20.3	28.5	22.6	24.7	20.1	25.7	30.6	26.7	11.8					24.1	23.0
3-4	23.0	25.0	22.5	24.1	26.0	20.7	22.6	23.4	23.2	22.8	7.8	40.1	24.5					22.9	23.1
5 or +	25.5	37.1	22.8	49.8	37.4	9.4	26.7	24.3	33.5	20.6	0.3	23.4	58.4					24.0	27.1
Type of locality																			
With medical clinic	51.4	51.2	52.4	51.2	48.3	56.1	35.3	73.0	48.4	54.5	52.6	51.4	52.5	54.3	53.4	52.0	49.1		
Intensive action	48.6	48.8	47.6	48.8	51.7	43.9	64.7	27.0	51.6	45.5	47.4	48.6	47.5	45.7	46.6	48.0	50.9		
Marital status																			
Consensual union	19.1	32.2	16.1	33.3	20.5	13.4	19.6	18.9	22.0	17.3	18.0	22.0	17.7	6.7	27.5	24.0	20.6	19.5	18.8
Married	51.1	48.3	51.7	52.9	59.5	45.0	50.4	51.9	50.3	51.5	25.5	63.7	69.9	9.1	58.3	70.2	73.1	49.8	52.5
Widow	1.8	3.1	1.6	4.1	2.3	0.8	1.8	1.8	2.6	1.4	0.1	1.6	4.2	0.1	1.4	2.5	3.6	1.7	2.0
Divorced	0.3		0.4		0.5	0.3	0.2	0.4	0.4	0.2	0.3	0.3	0.3	0.1	0.5	0.5	0.2	0.1	0.5
Separated	3.3	2.0	3.6	2.1	4.0	3.3	3.5	3.1	3.5	3.2	2.3	3.9	3.9	0.4	8.4	2.7	2.4	3.3	3.2
Single	24.4	14.4	26.6	7.6	13.2	37.2	24.5	23.9	21.2	26.4	53.8	8.5	4.0	83.7	3.9	0.1	0.1	25.6	23.0

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

over time, particularly as regards the social actors who decide what a contraception need is, which women are regarded as having that need and the circumstances in which that need may be considered unmet, all of which are closely related to the actors' world view and to the objectives, concerns and interests involved in the definition.

Consequently, the estimates of women's contraceptive or unmet needs may vary greatly, depending on the criteria adopted: some are more restrictive and exclude various sectors of women, while others are more comprehensive. In both cases, whether rougher, conventional or more refined definitions are used, the aim is to distinguish women who are apparently exposed to the risk of having an unwanted pregnancy, taking as a starting (and an ending) point whether or not a woman wishes to have children, and her contraceptive practice. In some cases, the fact that a woman is pregnant or not, her condition of infertility, marital status and breast-feeding are considered; in others, needs are distinguished according to whether they wish to space their pregnancies or permanently avoid them. The main purpose of the various estimates is to gauge the potential demand for contraceptive methods. They also attempt to determine whose needs are not being satisfied, as central elements for programmatic purposes, establishing FPP coverage goals, focussing actions on certain population groups and estimating the economic and human resources required to implement these actions.

In order to illustrate the impact that the diverse criteria used may have on the various estimates, we have calculated the unmet needs for contraception for marginalised rural Mexican women of childbearing age (15-49 years old) on the basis of four different criteria. For all the estimates, we follow the usual practice when working with survey data; namely, considering that a woman has unmet needs for contraception if she declares that she does not want any/more children and that she does not use any form of contraception. The variations of estimates we provide depend upon the characteristics used to identify who are the women at risk to get pregnant, that, according to the information available, they refer to their reproductive background (i.e., pregnant, infertile, menopausal, sexually active women, etc.), the reasons given by them for not using contraception and their reproductive preferences, either to space or limit their childbearing. Table 2 shows the four estimates; the upper panel refers to currently married women, while the lower one refers to currently married, once married and not married

Table 2
Quantitative contraception unmet needs. Married women and married-unmarried women

	Total		Ethnicity		Education			Age			Parity			
	% all women	% married women	% indigenous	% non-indigenous	% non educated	% incompl. primary	% complete primary or +	% 15-24	% 25-34	% 35-49	% parity zero	% 1-2 children	% 3-4 children	% 5 or + children
Married														
% married women	70.2	100.0	80.5	67.8	86.3	80.0	58.4	43.5	85.7	87.6	15.8	85.8	94.3	93.8
Unmet1	15.8	22.5	29.7	12.6	33.7	19.1	7.6	7.7	15.7	25.9	1.5	13.5	21.3	28.7
Unmet2	9.2	13.1	19.0	6.9	18.4	12.6	3.8	4.4	10.0	14.2	0.8	6.0	12.0	18.8
Unmet3	7.6	10.8	17.3	5.3	17.1	9.8	2.9	3.6	8.0	12.0	0.6	4.5	8.5	17.2
Unmet4	17.1	25.3	30.0	14.1	29.4	18.5	12.0	17.0	19.1	15.0	7.1	20.8	20.1	21.9
Married and unmarried														
Unmet1	16.5		30.7	13.2	35.2	19.8	7.9	8.2	15.9	27.1	1.8	14.7	21.4	29.7
Unmet2	9.6		19.2	7.3	19.4	12.9	4.1	4.7	10.3	14.9	1.0	6.6	12.1	19.5
Unmet3	7.9		17.6	5.6	18.0	10.1	3.0	3.8	8.3	12.5	0.7	5.1	8.5	17.8
Unmet4	17.5		30.4	14.5	30.5	19.0	12.2	17.5	19.4	15.5	7.4	21.7	20.1	22.5

Unmet1 = Rough unmet contraceptive needs = Non contraceptive users, do not want more/any children.
Unmet2 = Non contraceptive users, non-pregnant, non-infertile/menopausal, do not want more/any children.
Unmet3 = Non contraceptive users, non-pregnant, non-infertile/menopausal, sexually active, do not want more/any children.
Unmet4 = Non contraceptive users, non-infertile/menopausal, sexually active, do not want more/any children or wanting one after two years in the future.

women who have had at least one child, have been users of contraception in the past or are sexually active.

Centring our attention on the upper panel, the first estimate (Unmet1) corresponds to the rougher, more conventional definition. It includes all currently married women of reproductive age who, despite their stated wish not to have any more children, do not practice any form of contraception. According to this estimate, we find that 22.5% of married women have unmet contraceptive needs (which represents almost 17% of the total number of women of childbearing age, married and unmarried). However, this criterion tends to overestimate the scope of UNFC since it does not consider the possibility that some of those women were not really exposed to the risk of becoming pregnant, such as the currently pregnant, the infertile or menopausal, amenorrheic or those who do not have active sex lives. On the other hand, it also underestimates these needs by failing to include women who, at the time of the survey, only wish to space their pregnancies (spacers).

The second estimate (Unmet2) shows how wrong it can be to indiscriminately consider all women who do not wish to have any more children and who do not use contraceptives, as potential demanders. When including only those women who do not wish to have any more children, do not use contraceptives and are potentially exposed to the risk of getting pregnant (as long as they are not pregnant, infertile or menopausal), the figure of unmet needs for contraceptives is 42% less than the previous estimate, with 13% of married women having those needs (10% of all women).

Moreover, when considering some of the reasons given for not using contraception, there is a small group of women who despite being married do not have sexual relations with their partners. This group includes women whose husbands are temporarily absent, mainly as a result of migration, which is relatively frequent in certain parts of the country, particularly the poorest areas. Others do not have sexual relations with their partners for various moral, cultural or personal reasons or because of illness. Excluding these women obviously reduces the estimate of UNFC (Unmet3), making it the lowest of the four considered, since it decreases to less than half the first estimate and is 17% less than the second one. On the basis of this criterion, women with unmet contraceptive needs account for 11% of married ones (less than 8% of all women). However, it is worth mentioning that this may be a questionable estimate since it ignores the risk to which those women

who do not have active sex lives for temporary or transitory circumstances, may be exposed when they renew them at any time.

The fourth and last estimate (Unmet4) includes not only women's present contraceptive needs, but also those that are foreseeable in the short term. It includes non contraceptive users, fertile and sexually active, who do not wish to have any more children, but also those who, whether pregnant or not, wish to wait at least two years before having a child (spacers). This is the most complete of all the estimates presented and therefore the highest: one out of every four married women (25%) has unmet contraceptive needs (17% of all women of childbearing age)[18].

Despite the fact that all the women studied live in marginal areas, the living conditions of some are worse-off than others, a fact reflected in the different levels of unmet needs when women's sociodemographic characteristics are considered. These levels reflect the degree of correspondence between reproductive preferences and contraceptive practices, which may be conditioned by cultural factors, the lack or inadequacy of FPP, the possible adverse experiences in women's previous use of methods and/or their fear of the latter. Thus the proportions of married, indigenous women, with no schooling, and older women with UNFC are always higher than those of non-indigenous, more educated and younger women, regardless of the criteria used for estimating their needs. Thus, the figure of indigenous women with unmet needs is always more than twice that of non-indigenous ones. Moreover, the UNFC of women with no schooling are four times higher than for those who have at least completed elementary school; older women's (35-49 years) triple younger women's (15-24) while the percentage of those with the highest parity is two to four times that of women with 1-2 children, with the sole exception of the fourth estimate in all cases.

Excluding pregnant and infertile or menopausal married women (Unmet2), as well as women who do not engage in sexual relations with their partners (Unmet3), has different effects for women with

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18. This last figure is slightly higher than the one reported in the official figures for 1997, although we do not know how the latter was calculated. According to this figure, the unmet demand of married women in rural areas of the country totalled 22.2%, 12.8% of which were spacers and 9.4% did not wish to have any more children. Nationwide, unmet demand totalled 12.1%, corresponding to 6.9% for spacers and 5.2% for those who did not wish to have any more children (CONAPO, 2001).

different characteristics. The relative difference between indigenous and non-indigenous women with unmet needs increases with respect to the first estimate, as does the difference between those with no schooling and those with higher educational attainment and between those with lower and higher parity. There is also a slight reduction in the differences between women of intermediate and older ages (25 to 34 and 35 to 39) in comparison with younger women. However, regarding the unmet needs either for limiting or spacing their offspring (Unmet4), the relative differences are reduced or even inverted inasmuch as this estimate is the one that yields the highest levels of unmet needs for younger (18%), more educated (12%) women and those with lower parity (7% of nullipara and 21% with 1-2 children) (see Table 2).

If one considers married and unmarried women (widows, divorcees, separated, single mothers and single women with an active sexual life), the lower panel in the Table shows that the total proportion with unmet needs rises between 0.3 to 0.7 points for the different estimates. Although the relative difference may appear very small, it is not insignificant in absolute numbers[19]. Even though this slight difference may be due to the almost universal pattern of marriage in Mexico, it may also be due to the limitations of the survey questions on which the estimates were based, which do not account for the risks to which unmarried women are actually exposed. The differences according to the women's characteristics show a very similar pattern to that observed for current married women, those differences being higher for the first estimate (Unmet1), especially among the non-educated, indigenous and older women, with higher parity, groups for which the percentages of women with unmet needs rise by 1.0 to 1.5 percentage points when including the non married.

What does this overview offer and how should it be interpreted? Regardless of the criteria used in each estimate, one should recall that these are definitions attributed to women; in other words, they are not drawn from direct questions about their own specific needs. Therefore, as stated earlier, this attribution responds to the logic, interests and

19. To have some idea of what this small percentage of the country's entire population means, it is worth noting that according to data from the census, the number of women of childbearing age living in localities with fewer than 2,500 inhabitants totalled 5.6 million in 2000. A rough estimate of the numerical significance of an additional 0.7% of women with unmet contraceptive needs would be close to 36,000 women.

purposes of diverse actors, in order to legitimise and justify FPP, their coverage goals and focused orientation, and the resources needed to implement these interventions, which have led to a greater segmentation and exclusion of the contraceptive needs of certain population groups, such as non married, pregnant, infertile or sexually inactive women. Moreover, these diverse definitions and estimations undoubtedly reflect the high variation of intensities of apparently unmet contraceptive needs observed at a particular stage of their lives, accounting for the conditions of greater vulnerability of certain groups, such as indigenous women, those who have had fewer opportunities of access to education, and those who live in a context of lack or weakness of FPP or one in which these programs have not been socially legitimised.

In this section, we have merely considered one aspect of the satisfaction of contraceptive needs, i.e. the one related to its coverage (registration, estimation). Without denying its importance and despite the issues raised earlier, it is essential to realise that this aspect does not cover all women's contraceptive needs, particularly those referring to the type of methods they require as a result of their specific life circumstances and above all, the broad range of needs emerging from the reproductive health approach. Some of these are described in the following sections.

3.3. Unmet needs related to women's reproductive goals

Women's desires or preferences for deciding whether or not to have another child was the original key concept for estimating unmet contraceptive needs. Since the beginning of family planning programs and from the traditional UNFC perspective, concern over the number of a woman's offspring has centred on women who have a high number of children, those who – at a specific moment (at the time of the survey) or stage of their lives – stated that they do not wish to have another child or that they want to have one later on, and those who mentioned they have already exceeded their reproductive goals. In other words, it has focussed on women wishing to limit or space their children, regarding them as being in need of contraception and taking its magnitude as symptomatic of the degree of necessity to expand contraceptive services.

Notwithstanding, from the point of view of the reproductive health perspective, particularly the right of each individual to have the

number of children he or she desires, unmet needs related to women's reproductive goals should not be circumscribed to the ability to prevent unwanted pregnancies or delay their occurrence. Having fewer children than the desired number, experiencing difficulties in becoming pregnant or achieving the desired number of children may also constitute major sources of dissatisfaction. This issue, however has tended to be overlooked in FP services, being neglected or being regarded as less important than having a higher number of children than desired. This dissatisfaction has also been ignored in research where very little is known about its intensity and characteristics. Even with the limited data available, some insights can be drawn regarding this issue.

Findings in Table 3 show that women in marginalised rural areas who have ever been pregnant report an average number of live-born children that is very similar to the ideal or desired number (3.9 and 3.8 respectively). However, when considering women according to certain indicators of social inequality, the picture obtained is quite different and more meaningful. Indeed, indigenous women without schooling or who have not completed elementary school, the oldest ones and those with the highest parity have had an average of 0.3 to 1.9 children more than they would like to have had. This group includes a large number of women whose childbearing years elapsed in a context in which family planning was not yet socially legitimised, meaning that their access to FP services was virtually non-existent. Conversely, women who completed their elementary education and belong to a generation or social context where these programs were already established (women under 35 years old) have between 0.2 and 1.5 fewer children than they would like to have. Obviously, some of these women include those who have not yet completed their reproductive lives, although there is also a shortfall in the number of children women wish to have among a substantial proportion of those who are near the end of their reproductive lives, as well as among those who have been sterilized. Around 26% of women aged 40-49 and 36% of those who have been sterilized have achieved their reproductive ideal, while 25% and 18% of them have had fewer children than they would like to have had. Conversely, 44% in both cases have had more than their ideal number[20].

20. It is worth mentioning that nearly 5% of the women fail to define their ideal number of children, since some of them answered, "The number God gives me" or "I don't know," when asked about the total number of children they would have liked to have. Failure to define the number of children, together with this type of

Even though the achieved/desired gap may be partially due to various sociocultural factors that go beyond the confines of FPP, such as women's marital status, the value placed on children, gender and power relations, the process of negotiation, and personal decisions within the couple, this gap may also partly be attributed to health institutional factors. We find, for example, women or their partners with infertility problems, women that experience difficulties in achieving full-term pregnancies or the survival of their live-born children, ones who have had favourable or unfavourable personal experiences in relation to the use of contraceptives and medical services, as well as women with the possibility of having risk-free sexual practices. The proper prevention and attendance of problems of infertility, pregnancy, childbirth, postpartum and puerperium and of children's health, as well as access to quality contraceptive services and sexual education programs are not only related to the individual's self-awareness and behaviour but also largely the responsibility of health systems.

Thus, for example, infertility is not only due to congenital and age-related causes, but may also be an acquired condition, resulting from infections and untreated reproductive tract ailments, the incorrect use of contraceptive methods, malpractice and the inadequate care of pregnancy, childbirth or other reproductive events. In the case of women in marginalised rural areas, 24% are infertile, 19% because they were sterilized and the rest because of difficulties in conceiving, because they are menopausal or due to other sterility-related factors. These women experience other forms of dissatisfaction. Just over one out of eighteen sterilized women, two out of five women who have difficulty conceiving and nearly two out of three sterile women expressed a desire to have another child, while just 2% of menopausal women would like to have another child. It seems important to note that although ethnicity does not seem to make a great difference in the proportion of infertile women, the underlying causes of infertility differ between indigenous and non-indigenous women. From the data shown in Table 3 suffice it to say that 58% of the cases of indigenous women's infertility are due to female sterilization versus 83% in the

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response, is particularly common among older indigenous women and those who have had no schooling (11-13%).

Table 3
Dissatisfaction with the number of live-born children

	Total	Ethnicity		Education			Age			Parity			
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	Zero	1-2 children	3-4 children	5 children or +
Mean number of children born alive	3.9	4.5	3.8	5.2	4.5	2.9	1.8	3.6	5.5		1.5	3.5	6.7
Mean number of children still alive	3.7	4.1	3.6	4.6	4.1	2.8	1.7	3.4	5.0		1.5	3.3	6.1
Ideal number of children	3.8	4.2	3.7	4.6	3.9	3.4	3.0	3.8	4.4	3.5	3.0	3.7	4.8
Number of live-born children vs number of desired children													
Women aged 40-49:	100.0	100.0	100.0	100.0	100.0	100.0			100.0	100.0	100.0	100.0	100.0
Less than desired	23.9	18.6	25.3	21.1	21.5	33.8			23.9	52.8	77.5	31.1	11.3
The ones desired	25.8	23.2	26.4	16.4	28.2	33.4			25.8	26.9	18.5	44.5	20.4
More than desired	45.4	45.4	45.4	51.5	46.9	32.8			45.4			23.7	61.7
Non-defined/Didn't answer	4.9	12.8	2.9	11.0	3.4				4.9	20.3	4.0	0.7	6.6
Sterilized women:	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0
Less than desired	17.6	7.5	19.2	11.6	16.3	21.7	13.7	20.8	16.2		44.9	19.9	10.9
The ones desired	35.6	38.3	35.1	19.1	34.7	43.9	61.3	39.9	31.4		51.3	54.0	18.8
More than desired	43.7	44.8	43.5	60.9	46.1	33.4	25.0	35.4	49.5		3.8	25.1	65.0
Non-defined/Didn't answer	3.1	9.4	2.2	8.4	2.9	1.0		3.9	2.9			1.0	5.3

% of non-fertile women	23.7	22.8	23.8	30.9	31.0	16.5	2.9	23.6	49.0	3.2	13.1	35.6	45.0
Female sterilization	18.6	13.2	19.8	18.3	25.3	14.4	2.2	20.1	37.0	0.1	7.4	31.4	37.5
Difficulties to get pregnant	1.9	3.6	1.5	4.2	1.6	1.2	0.4	2.5	3.1	0.8	2.9	2.1	2.0
Menopause	2.1	4.3	1.6	6.4	2.8	0.3		0.2	6.7	0	1.7	1.8	5.1
Sterility by other reasons	1.1	1.7	0.9	2.0	1.3	0.6	0.3	0.8	2.2	2.3	1.1	0.3	0.4
Non-fertile women: Number of live-born children vs number of desired children													
Less than desired	21.9	14.5	23.5	18.7	20.0	26.3	14.8	25.5	20.6		63.9	22.3	10.4
The number desired	33.4	38.4	32.4	21.0	33.8	40.9	60.5	39.9	28.7		33.2	53.5	19.2
More than desired	41.4	37.8	42.2	52.2	43.5	31.9	24.7	31.2	47.3		2.2	23.4	64.8
Non-defined/Didn't answer	3.3	9.3	1.9	8.1	2.7	0.9	0.0	3.4	3.4		0.7	0.8	5.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0
% of infertile women desiring a child	10.5	6.9	11.2	5.0	9.3	15.4	32.8	15.4	6.4	77.1	27.4	6.8	3.4
% of infertile women desiring a child by infertility type													
Female sterilization	5.6	1.8	6.1	1.8	5.1	7.7	10.8	7.7	4.0		14.5	6.4	3.3
Difficulties to get pregnant	38.4	11.4	53.5		43.0	79.6	93.0	62.1	10.2	87.8	63.9	19.6	2.2
Menopause	1.7		2.7	2.3	1.1				1.7		2.5		2.0
Sterility by other reasons	63.6	55.2	67.2	53.2	64.6	74.2	100.0	65.9	55.8	78.6	58.8		28.4

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

case of non-indigenous women[21]. It is also worth noting that infertile women wishing to have a child account for 2.5% of the total number of marginal rural women, rising to 3.6% of those aged 25-34 and of those with 1-2 children.

Moreover, the prevalence of high infant mortality rates among the rural population, particularly the indigenous population, as well as the incidence of stillbirths among them, are factors related to the desire to have more children and cannot be regarded separately from the prevailing conditions of access and quality of medical care, as well as from the general socioeconomic and cultural poverty circumstances that characterise these marginalised areas**.** An analysis of the impact of children's mortality and comparing the mean ideal number of children with the mean number of children still alive shows a high degree of correspondence between them. However, it should be noted (Table 3) that indigenous women, those that did not complete primary school, older ones and those with high parity, have had an average of 0.5 to 0.6 children born alive who died. As shown in Table 4, a fifth of the women with live-born children have experienced the death of a child. This proportion rises to one fourth of indigenous women, just fewer than one in three for women without schooling and of those aged 35 to 49, and nearly two out of every five women with high parity. The effects of death are also reflected in the fact that the proportion of women with fewer surviving children than the number desired rises to one third among women aged 35 to 49 and to 23% in the case of sterilized women. It is also interesting to observe that 7% of women who have ever been pregnant have had at least one stillborn child and that stillbirths not only occur among older women with high parity and less schooling but also among younger, more educated women and those with the lowest parity. Finally, another key element is the high incidence of abortion; particularly among older, non-indigenous women and those with high parity (17% of once pregnant women have had at least one abortion).

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21. Nineteen percent of indigenous women and 17% of non-indigenous women are 35-49 years old; of whom 19% and 10% respectively report being menopausal (8 and 7% aged 45-49, 26 and 17% of whom are menopausal). This suggests an earlier cessation (whether real or imaginary) of reproductive functions among the indigenous population. Moreover, among all age groups, the proportion of sterile women and of those who have difficulty conceiving is relatively higher among indigenous women.

Table 4. — Other issues related to women's dissatisfaction

	Total	Ethnicity		Education			Age			Parity			
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	Zero	1-2 children	3-4 children	5 children or +
Number of surviving children vs number of children desired													
Women aged 40-49:	100.0	100.0	100.0	100.0	100.0	100.0			100.0	100.0	100.0	100.0	100.0
Less than desired	33.2	32.7	33.4	34.1	30.3	39.2			33.2	52.8	77.5	35.8	24.0
The ones desired	21.6	17.8	22.6	14.2	21.7	32.2			21.6	26.9	18.6	39.9	15.7
More than desired	40.3	36.7	41.1	40.7	44.6	28.6			40.3			23.6	53.7
Non-defined/Didn't answer	4.9	12.8	2.9	11.0	3.4				4.9	20.3	3.9	0.7	6.6
Sterilized women:	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0
Less than desired	22.5	17.9	23.2	17.8	21.9	25.3	13.7	22.3	23.3		44.9	23.4	17.7
The ones desired	34.6	31.9	35.0	17.8	32.8	44.0	61.2	39.8	29.9		51.3	52.9	17.7
More than desired	39.8	40.8	39.6	56.0	42.4	29.7	25.1	34.0	43.9		3.8	22.7	59.3
Non-defined/Didn't answer	3.1	9.4	2.2	8.4	2.9	1.0		3.9	2.9			1.0	5.3
% women with ABC[a]	72.0	83.1	69.5	89.2	83.7	58.6	38.7	90.2	94.8		100.0	100.0	100.0
% women with ABC, at least one of which died	19.6	27.4	17.5	30.9	23.4	10.3	7.2	16.6	28.8		4.5	15.3	37.6
% women ever pregnant with stillborn child	6.9	7.4	6.8	7.7	8.3	5.3	4.5	7.0	8.2	7.4	3.1	5.8	11.4
% women ever pregnant with at least one abortion	16.6	9.3	18.6	13.1	19.9	15.4	6.8	15.0	23.4	26.2	10.7	14.6	23.3

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

a. ABC: alive-born child(ren).

We consider that the evidence mentioned above is clearly indicative of the prevalence of reproductive health problems. It points to the existence of other kinds of unmet needs, related to having the desired number of offspring, both among women and couples who have more children than they would like to have had and among those who have fewer than their ideal. The persistence of a high incidence of abortions, as well as of sterilization, particularly among young women, the prevalence of high levels of infant, child and/or youth mortality, continue to constitute significant reproductive health problems and unmet needs that warrant attention in themselves, especially among the poorest segments of women, the indigenous and the uneducated, where they are exacerbated.

How should one interpret the meaning of women's unmet needs in relation to their reproductive goals? Nowadays, the tension between societal or national goals, interests, concerns and needs and individual, private and intimate ones should not only be seen as related to the social concern or individual desire to prevent unwanted pregnancies or delay them, but also to reproductive unmet needs as regards the ability to reproduce and the freedom to decide if, when and how often to do so.

3.4. Needs for what or on what RH components related to FPP (contraception)

In this section we consider the well-known and traditional KAP indicators related to FPP and the concept of unmet need for contraception (KAP-gap). But instead of dealing with the concept of attitudes (which are poorly and insufficiently obtained through survey data) we prefer to talk about women's options, since this concept better reflects the reason and circumstances that led them to opt for a specific method. To address these issues, we should bear in mind the fact that the knowledge, options and practice of contraception for preventing pregnancy and reproductive tract infections (RTIs) among the different groups of the population should not only be attributed to the achievements and results of different actions and interventions that take place, mainly, at the political and institutional level. They are also due to changes in the social, economic, cultural, ideological and technological spheres of society that lead to different perceptions, attitudes, needs and demands regarding the options for contraception and, above all,

are a result of the socialisation, legitimisation and acceptance of FP or RH programs among the various sectors of the population.

3.4.1. Unmet needs for contraceptive knowledge

In most surveys, it seems to be commonly assumed that hearing about a specific contraceptive method means knowing about it, but it is highly questionable to assume that knowing or being informed that a method exists, necessarily means that a women knows the benefits and implications of its use and how to use it, which would constitute an indispensable minimum for being able to talk about knowing a method. Therefore, the information provided by these data sources is extremely limited and misleading for analysing what women's unmet needs are regarding their knowledge and information about contraceptive methods. Nevertheless, the data from the Reproductive Health Survey (RHS-99) offers some interesting insights on this issue.

As Table 5 shows, 89% of married women living in marginalised rural settings had heard of at least one contraceptive method.[22] However, the conditions of greater social backwardness and poverty in which indigenous women's lives take place, even within the already precarious conditions that prevail in these settings, and the inadequacy of health services provided within these areas for them, are reflected in the fact that barely 69% of the indigenous women are able to spontaneously mention any contraceptive method, as opposed to 94% of their non-indigenous peers. Likewise, only 72% of women without schooling were able to identify some form of contraception whereas among married women who have never practised contraception, only 67% said that they had heard of at least one method.

In the case of Mexico, contraceptive knowledge of specific modern methods for preventing pregnancy is partially the result of educational and preventive programs, and mainly due to the contraceptive information and services given by health providers. Therefore, it is not surprising that the most common contraceptive methods offered by service providers and the ones largely used by women are the ones they

22. This percentage and those given below correspond to the women who spontaneously mentioned a method for preventing pregnancy. In order not to overestimate knowledge of contraceptive methods, we have not included cases where women said they have heard about a particular method after the interviewer had mentioned it.

Table 5. — Contraceptive methods knowledge

	Total	Ethnicity		Education			Age			Parity				Contraceptive use		
		Indigenous	Non-ndigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	zero	1-2 children	3-4 children	5 childr. or +	Never user	Ex-user	Actual user
Married women																
% have heard about at least one method[a]	*88.8*	*68.6*	*94.4*	*72.2*	*91.4*	*95.0*	*88.0*	*89.5*	*88.6*	*74.7*	*91.3*	*92.3*	*86.2*	*67.0*	*100.0*	*100.0*
% of married women who have heard about:																
Oral pills	82.8	61.3	88.7	62.4	86.3	90.1	80.5	84.5	82.6	66.2	85.9	85.4	80.9	60.7	92.5	90.5
IUD	75.2	47.7	82.7	54.2	76.0	85.1	77.3	79.6	69.6	57.7	81.2	80.3	68.7	53.7	79.0	84.3
Injections	71.2	48.1	77.6	54.2	72.4	78.9	69.6	74.1	69.4	48.6	76.0	74.6	68.3	49.3	82.4	78.5
Feminine sterilization	54.0	38.2	58.3	44.9	55.9	56.9	42.0	54.8	60.5	28.7	46.9	60.6	58.6	31.6	46.3	66.8
Condom	48.6	15.8	57.7	20.7	49.6	62.0	49.6	51.2	45.5	37.9	57.2	52.1	40.3	25.0	48.9	59.8
Masculine sterilization	30.5	14.8	34.9	16.1	30.3	38.1	29.9	31.5	30.0	17.0	33.7	33.8	27.4	19.3	27.1	36.9
Rhythm, abstinence	13.1	5.0	15.4	5.5	12.0	18.0	9.7	14.3	14.1	10.4	13.7	15.7	10.8	6.2	13.2	16.4
Local methods	11.0	0.6	13.8	2.5	10.4	15.7	8.1	12.0	11.7	2.0	12.2	14.0	8.8	2.0	10.8	15.3
Withdrawal	6.0	1.0	7.4	1.4	5.8	8.6	3.4	7.8	5.8	7.5	5.9	7.3	4.7	2.7	5.8	7.7
Norplant	2.3	0.2	2.9	0.2	2.5	3.2	1.1	3.2	2.2	1.0	2.0	3.0	2.2	0.2	2.7	3.2
Other methods	1.0	1.1	1.0	0.9	1.0	1.1	0.5	0.7	1.6	0.0	0.7	1.2	1.3	0.5	1.0	1.3
Mean number of known methods[b]	4.5	3.3	4.6	3.5	4.3	4.7	4.2	4.6	4.4	4.1	4.5	4.6	4.3	4.0	4.4	4.7

Non-married women																
% have heard about at least one method[a]	*74.9*	*48.5*	*78.6*	*47.9*	*73.0*	*78.5*	*73.1*	*79.0*	*79.9*	*71.6*	*82.3*	*92.1*	*90.7*	*72.1*	*100.0*	*100.0*
% of non-married women who have heard about:																
Oral pills	69.1	41.9	72.9	40.0	64.5	73.8	68.0	72.6	71.4	65.7	81.1	88.9	77.7	66.3	94.9	90.0
IUD	53.8	28.0	57.4	25.1	49.4	58.4	51.5	62.5	56.3	49.6	69.8	70.1	67.9	50.5	83.1	79.0
Injections	53.5	31.2	56.6	22.0	50.5	58.0	52.0	57.0	58.1	49.8	65.4	63.6	75.5	50.4	87.5	71.4
Feminine sterilization	34.9	15.9	37.6	16.0	34.1	37.4	31.7	44.9	41.6	31.8	38.4	52.6	59.7	32.0	51.0	67.1
Condom	44.7	13.2	49.1	8.6	35.8	51.5	46.3	47.0	33.4	45.4	44.1	51.1	31.0	43.2	60.2	53.2
Masculine sterilization	26.6	7.7	29.2	8.3	18.5	31.1	25.9	27.4	29.3	25.9	27.2	40.3	24.4	25.3	41.9	31.3
Rhythm, abstinence	13.2	2.2	14.7	2.2	4.2	17.1	12.5	17.3	11.9	13.6	15.0	9.5	6.5	12.8	20.2	11.2
Local methods	11.2	0.4	12.7		7.3	13.7	10.3	16.2	10.3	11.1	12.8	12.8	8.2	10.6	16.3	15.0
Withdrawal	6.1		6.9		1.5	8.2	6.0	8.3	4.1	6.3	6.1	8.4	0.7	6.1	9.5	2.5
Norplant	3.3	0.4	3.7		0.6	4.5	3.1	5.6	1.3	3.5	3.8	1.0		3.1	8.1	1.5
Other methods	0.6		0.7		0.2	0.8	0.6		1.1	0.6	0.8		0.9	0.5	1.6	0.9
Mean number of known methods[b]	4.2	2.9	4.4	2.5	3.7	4.5	4.2	4.5	4.0	4.2	4.4	4.3	3.9	4.2	4.8	4.4

a. Refers to women that spontaneously mention at least a contraceptive method when they are asked if they have heard about means or methods for not having children or spacing them.

b. Refers only to women that have heard at least about one method. Excludes those who do not know about any method.

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

know best: contraceptive pills and IUD ranking in the first place as the ones more frequently mentioned (83% and 75%), followed by the injectable methods (71%), while feminine sterilization is familiar to just over half of all married women (54%), current users of any method being those who know most about it (67%). Male sterilization knowledge is only mentioned by 30% of all married women, a fact that confirms the traditional delegation of reproductive responsibilities to women as well as the dominant orientation of the FPP towards them. Moreover, indigenous women and those with no schooling have less knowledge of all the specific methods listed in the survey.

Knowledge of condoms warrants special mention, both as a contraceptive method and in the prevention of sexually transmitted diseases (STDs) and HIV/AIDS, due to the lower degree of knowledge about it. Although it is known as a contraceptive by nearly half of all married women (49%), it is only mentioned by one out of every six indigenous women, one out of every five with no schooling and a fourth of never users, which contrasts with the nearly three out of every five non-indigenous, more highly educated women and current users who identify it as a contraceptive. In turn, the rhythm and local methods (spermicides, ovules and the diaphragm) are known by nearly one out of every eight married women, whereas other methods such as withdrawal, Norplant and others (particularly herbal infusions), are known by 6% or fewer of married women, being in all cases known more by non-indigenous, more highly educated women and current contraceptive users.

Finally, the lower degree of contraceptive knowledge among unmarried women could be related to the lack of response to a potential need due to moral restrictions, or to less awareness of the risks involved in becoming pregnant. Even when they are not theoretically exposed to the risk of conceiving, they can become subject to this risk at any moment. It might therefore be plausible to consider that 25% of them are potentially exposed to the risk of an unwanted pregnancy because they were unaware of the existence of ways of preventing it. This risk is even greater among indigenous women and those with less schooling, particularly single women: two out of three single women with no schooling (67%) and just under three out of every five single indigenous women (57%) are unable to identify any method, in con-

trast with the 23-24% of single women who completed elementary school and to non-indigenous women[23] (see Table 5).

In short, it is important to stress the need for more adequate and better conceptual and methodological tools to obtain accurate data about women's and men's knowledge on contraception, as well as to know what information is offered to women and men by service providers and educational programs. We should recall that most surveys do not gather information on men. Undoubtedly, the content and understanding of the information given by service providers about the use of the methods and the benefits and consequences of their use are meaningful aspects when addressing the issue of knowledge.

3.4.2. Contraceptive practice

Knowledge of the existence of contraceptive methods is a factor that theoretically precedes the use of the latter. However, the fact of knowing about them does not mean that they are actually used, or that they are among the known methods from which the method used was chosen. In 1999, the level of contraceptive practice by married women (57%) was a little over the level observed for all rural areas in Mexico in 1997 (54%), which is 25% higher than that of users in 1992.

This increase is undoubtedly due to the strengthening and expansion of programs aimed at providing health services for the population in the poorest, most isolated rural localities, lacking permanent medical services, as well as to the population's felt needs and demands to space, reduce and control their fertility. The following factors have contributed to the expansion of contraceptive practice: the implementation of programs based on mobile brigades that periodically visit rural localities and provide them with basic health services, including those related to contraception; the link between official programs and traditional health agents, particularly midwives and their training as a strategy for the dissemination of contraceptive practice; and the increased access of marginalised populations to clinics located in adjacent localities for the care of more complex health problems or childbirth.

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23. Figures for total number of unmarried women are 52%, 52%, 22% and 22%, respectively. The relative distribution regarding the knowledge of specific methods is similar to the one of married women.

Table 6
Contraceptive use

	Total	Ethnicity		Education			Age			Parity			
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	zero	1-2 children	3-4 children	5 children or +
Married													
% users	56.7	35.3	62.5	38.5	59.1	63.8	44.2	59.3	61.7	9.0	55.3	63.4	60.6
Method used:	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Feminine sterilization	44.8	43.1	45.0	53.8	50.6	37.2	11.6	39.0	64.8	7.8	14.0	50.6	64.0
IUD	29.9	29.3	30.0	26.3	24.5	35.5	60.6	30.9	15.6	9.2	55.0	24.6	16.1
Rhythm	6.7	8.1	6.5	6.9	6.5	6.8	4.7	8.0	6.3	49.8	7.2	4.6	7.1
Oral pills	6.3	4.9	6.6	3.0	7.5	6.4	8.1	7.3	4.7	7.4	10.0	5.5	4.3
Injections	4.2	8.3	3.6	3.1	4.5	4.4	7.3	4.5	2.7	14.2	5.2	3.6	3.9
Withdrawal	3.9	5.4	3.7	3.7	3.9	3.9	2.8	3.8	4.4		3.9	5.8	2.2
Condom	3.6	0.5	4.1	2.1	2.2	5.2	3.9	6.1	1.1	11.6	3.8	5.2	1.7
Masculine sterilization	0.4	0.4	0.4	0.4	0.3	0.6	1.0	0.2	0.4		0.9		0.5
Other[a]	0.2		0.1	0.7				0.2				0.1	0.2

Non-married													
% users	5.2	4.6	5.3	2.7	11.5	3.6	1.8	8.6	20.5	0.3	19.1	31.9	26.9
Method used	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Feminine sterilization	50.0	100.0	44.0	100.0	59.5	36.6		33.4	82.8		28.9	71.9	69.2
IUD	33.6		37.7		32.4	37.8	80.3	26.4	14.3		57.1	7.2	30.8
Injections	6.1		6.7			12.5	3.6	21.0		18.3	10.4	3.4	
Withdrawal	2.4		2.7		5.0		9.5			48.1			
Condom	1.7		1.9			3.4	6.6			33.6			
Masculine sterilization	4.7		5.3			9.7		19.2				17.5	
Other[a]	1.5		1.7		3.1				2.9		3.6		

a. Includes local methods, abstinence and Norplant.
Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

Despite all these initiatives, in which the institutional supply seems to respond to women's demand for contraception, there are still sharp differences in the level of contraceptive use by the various groups of women within marginalised rural areas. Whether because of barriers imposed by health institutions through the quantity, quality and characteristics of the services they offer, or because of those derived from socioeconomic, cultural, familial and personal factors that limit women's access to contraception, the level of contraceptive use among indigenous married women and those without schooling is barely 60% of the respective level of use of non-indigenous women or those that have completed elementary school (see Table 6).

The high value that continues to be placed on motherhood in Mexico, its identification as the basic expression and crystallisation of female identity and women's activity, and the consequent need to prove their fertility, may constitute part of the principal barriers that explain why contraception mainly takes place after a woman has had at least one child and therefore at later ages. Just 9% of married nullipara[24] and 44% of those aged 15 to 24 use contraceptives, rising substantially to more than half for women with one or two children and nearly three out of every five for those over 25 years old. The latter proportion can be related to the economic and cultural changes that have taken place and helped reduce the social value placed on large families, as well as the rationale underlying FPP that, until recently, tended to focus mainly on women who had already had at least two or three children (see Table 6).

The rationale and orientation of FPP that favour the safest, irreversible methods over hormonal and less effective ones, which are also related to the side effects of the latter and women's preference for choosing more reliable or safer methods, is reflected in the fact that female sterilization and IUD are by far the most commonly used methods (45% and 30% respectively), as opposed to the lower use of contracep-

24. It is worth noting that nulliparae account for a tiny fraction of the total number of married women (6%), and that over half have been in a conjugal union for less than two years. Of the 91% that did not use contraceptives, the majority, 38%, were pregnant when the survey was carried out and 15% wished to be, while the other 20% had experienced difficulty conceiving. The remaining 18% did not use any kind of method because either they or their partners disapproved of the use of contraceptive methods, because they were afraid of side effects, or because of their partner's temporary absence or for other reasons.

tive pills and other methods such as injectables, rhythm, withdrawal and local ones, the method of choice for 7% or fewer users.

The high frequency of female sterilization, a characteristic pattern in many developing countries, is nonetheless worrying, particularly when it involves relatively young women. As Table 6 indicates, one out of every nine married users aged 15-24, two out of every five aged 25 to 34 and nearly two out of every three aged 35-49 have been sterilized. Even more striking and questionable is the existence of a small but not negligible fraction of women aged 15 to 19 in this situation (accounting for 5% of contraceptive users and 1.7% of married women in this age group). The age at which sterilized women as a whole were operated on shows that one out of every eight sterilized women were operated on before the age of twenty-five (0.8% being 17-19 years old and another 12% at 20-24) (Table 7).

At the same time, there is an inverse relationship between the percentage of women who have resorted to sterilization and educational attainment, which can partly be explained by the fact that those with less schooling are older and vice versa, although it is also possible that women with lower educational attainment were in a more vulnerable position during the negotiation and adoption of this method: 54% of users without schooling and half of those who have not completed elementary school have been operated on, a percentage that falls to 37% of users who have completed elementary school or have post-elementary studies. Likewise, it is the method most commonly used by women with higher parity (64% of users with five children or more) and by half of those with 3-4 children, although also by one out of every seven of those with one or two children, and, surprisingly, by a small fraction of those who have not had children (8%). It is interesting to note that the intensity of this practice is very similar between indigenous and non-indigenous women. The question, then, is whether this similarity reflects the predominance or possible imposition of this method by health service providers.

Failure to observe medical institutional norms regarding the performance of non-reversible methods, as well as the possible tension between these norms and the dominant FPP rationale imposed (i.e. contraceptive goals) emerges in the analysis of the opinions expressed by doctors themselves regarding the criteria they used to sterilize women: according to ENINPLAF survey data, only 54% believe there should be a minimal age for prescribing this method, which is 28.6

Table 7
Women sterilized

	Total	Ethnicity		Education			Age			Parity			
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	zero	1-2 children	3-4 children	5 children or +
Age at sterilization	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0
15-19	0.8	3.3	0.4		1.3	0.7	12.6	0.8			6.2	0.7	
20-24	11.9	9.0	12.3	3.2	9.6	18.0	87.4	18.4	2.8		28.3	21.5	1.5
25-29	30.5	24.0	31.5	21.4	34.4	30.2		56.4	18.8		39.5	46.0	17.1
30-34	29.6	38.8	28.2	30.8	28.1	30.9		24.4	34.6		15.4	18.6	40.5
35-49	27.2	24.9	27.6	44.6	26.6	20.2			43.8		10.6	13.2	40.9
Mean number of children born alive by age at sterilization													
15-19	2.3	2.0	2.7		2.0	3.0	2.0	3.0			2.0	3.0	
20-24	3.2	3.5	3.1	3.9	3.4	3.0	2.8	3.4	3.3		2.0	3.3	5.5
25-29	3.9	4.0	3.9	4.6	4.0	3.6		3.7	4.2		2.0	3.4	5.7
30-34	5.5	6.2	5.4	6.4	6.0	4.7		5.2	5.7		2.0	3.5	6.5
35-49	6.4	7.0	6.4	7.2	6.8	5.2			6.4		1.4	3.7	7.3

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

years on average, with an extremely wide range of variation between different health institutions, ranging from a minimum of 24.9 years to a maximum of 30.3 years on average; moreover 18% stated that the operation can be carried out at the age of twenty or even earlier. Likewise, half the doctors mentioned that there should be a minimum parity for prescribing a definitive method, which is 1.7 children on average, although this varies from 1.3 to 2.9 children between the doctors at the various institutions (ENINPLAF 1996).

From the point of view of women, what are the implications of being sterilized? What are the costs and/or the benefits of eliminating any possibility of having a child in terms of their partners and of their own current and future reproductive aspirations, as well as the stage of their family life and their health status? What are the risks of being exposed to a surgical operation? What are the changes in their physical and emotional lives that women may experience after being sterilized? What are the tensions and conflicts experienced by women who have made the decision to be operated on, in terms of their participation in this decision, the circumstances under which it has been taken and the pressures they may have been subjected to? Based on the survey data being analysed only a few partial insights can be addressed about the last issue, as shown in the next section. For the moment, suffice it to recall, as we pointed out earlier, that 18% of the women operated on have had fewer children than they would like to have had; 23% of the women who have been operated on have fewer surviving children than they would have liked to have, while 1% of the total number of women would like to have a child but have already had their Fallopian tubes tied.

One last aspect to be considered refers to the contraceptive needs of unmarried women. Although, as is the case with most other surveys, the one we analysed does not ask women directly about their contraceptive needs or whether or not they are sexually active, regardless of their marital status, it is interesting to note that 5% of currently unmarried women, i.e. women who are single, widowed, divorced or separated, reported that they used some form of contraceptive method (see Table 6). Although half these women use a non-reversible method, perhaps as a result of their past needs and the options offered to them, the fact that the remaining half uses a non-definitive method may indicate that at least some of them maintain an active sexual life, meaning that they have current contraceptive needs. Which are the contracep-

tive needs of women who are not married? Do unmarried but sexually active women face greater moral, social and institutional barriers for adopting a contraceptive method, compared with their married peers? None of these issues has received sufficient attention from FP programs and researchers[25].

3.5. The circumstances and facts surrounding the choice of contraceptive method

The choice of contraceptive method is one of the key aspects of the reproductive health approach, since it entails women's right to free-informed choice, partly reflects women's subordinate condition and is closely linked to the quality of health services. It has also become one of the most highly debated issues regarding the decision-making process and the structure of options and conditions available to the users of contraceptive methods for making an informed, free choice. The adoption of a specific method may be due to a number of reasons, ranging from influences, recommendations and direct or indirect impositions by other social actors, such as service providers, partners, peers, members of their family, priests, etc., to women's convictions and beliefs, as well as their perceptions about other practical issues, such as the cost of acquiring a particular method, its availability and accessibility and the quality of care received when adopting a method.

According to data yielded by the survey, the main reasons that led women to choose the method are the desire for an effective method to prevent having children (37%) and the service provider's recommendations (33%). Other less important reasons include: fear of the side effects of other methods (12%), the form of use and ease of acquisition (7%), and their partner's preference (6%). It is worth noting that 0.8% of users had the method applied without their consent. The search for effectiveness and the influence of service providers are especially evi-

25. Findings from the National Fertility and Health Survey undertaken in 1987 point out that 6% of the total number of widows and 10% of those who are divorced or separated had engaged in sexual relations during the month prior to the survey and that nearly 6% of single women of reproductive age had had intercourse at some time in their lives. In addition, 12.6% of the total number of women without partners, generally regarded as not being at risk of conceiving, had active sex lives, at least one third of whom did not use any form of contraception (Camarena *et al.*, 1994).

dent among women who were operated on and the users of IUDs[26]. On the contrary, the fears of side effects lead women to prefer the use of the condom as well as traditional and local methods, such as the rhythm method, withdrawal and abstinence, among others (see Table 8).

However, the way the question is put forward in the survey, particularly its circumscription within a battery of predefined answers, raises a series of doubts about its significance and how to interpret the findings obtained[27]. We should ask ourselves what women understand in terms of an effective method. Are they aware that the effectiveness of the method depends partly on their own responsibility? Were they told and did they understand the way the method should be used? To what extent was the selection of a method the result of a recommendation rather than an imposition? Were the women told of other methods, their benefits and side effects? To what extent did they understand the explanations given to them? Did they have the ability and the freedom to decide when faced with the service providers?

Although the content of the survey does not enable one to answer these questions in great detail, some of the following findings allow us to address them as part of the circumstances and facts surrounding the adoption of a specific method. A fifth of the users that adopted a particular method on the service provider's recommendation (21%) and a similar proportion of those who did so because they wanted an effective method did not receive information on the existence and characteristics of other methods, a figure that significantly rises to 26% of those who were sterilized. A similar lack of information is reported for other methods (see Tables 9a and 9b). Likewise, 22% of the users were not told about the side effects and implications they might experience when using a particular method, while a similar proportion (20%) failed to understand the service provider's explanation. In both cases, these adverse situations are more acute among sterilized women.

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26. Nearly half of those who adopted the method on the service provider's recommendation are sterilized and just over one in three are IUD users, while 66% who chose a method because of its effectiveness are sterilized and 30% use IUDs.

27. In fact, the figure of women that had had the method applied without their consent was obtained from the open text that accompanies the answers included in the code "Others" of the corresponding question as well as of other related questions.

Table 8. — Main reason for choosing the method currently used

	Total	Ethnicity		Education			Age			Parity			
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	Zero	1-2 children	3-4 children	5 children or +
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Medical prescription	32.7	42.1	31.2	33.8	33.7	31.4	32.4	29.0	36.1	12.4	33.0	30.0	35.4
Fears of side effects	11.6	8.3	12.1	6.7	11.0	13.6	9.0	15.2	9.5	9.7	12.6	14.0	8.7
Ease of use, disponibility	7.0	4.0	7.5	2.3	4.2	10.7	14.3	8.4	2.6	36.7	12.8	5.5	3.0
Spouse preference	5.9	9.1	5.4	9.7	7.3	3.6	4.9	7.1	5.2	9.1	6.1	6.7	4.8
Method's effectiveness	36.9	31.1	37.8	41.3	37.0	35.5	32.2	33.8	41.8	18.2	29.2	37.5	43.1
Non consent	0.8		0.9		1.5	0.5		0.1	1.7		0.1	0.6	1.5
Other	5.1	5.4	5.1	6.2	5.3	4.7	7.2	6.4	3.1	13.9	6.2	5.7	3.5
Feminine sterilization	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Medical prescription	34.5	42.1	33.4	34.4	33.8	35.5	16.1	34.6	35.7		42.5	34.5	33.0
Fears of side effects	3.3	1.0	3.6	1.9	1.2	6.2	5.8	6.0	1.6		1.3	4.6	2.5
Ease of use, disponibility	0.9	2.3	0.7		0.1	2.2		1.1	0.9		4.8	1.2	
Spouse preference	3.9	5.7	3.6	5.6	5.7	1.1	2.4	4.7	3.6		5.5	4.0	3.6
Method's effectiveness	54.2	45.1	55.6	56.5	54.5	52.8	66.0	51.0	55.1	100.0	40.5	52.4	58.0
Non consent	0.8		0.9		0.9	1.0			1.3				1.6
Other	2.4	3.8	2.2	1.6	3.8	1.2	9.7	2.6	1.8		5.4	3.3	1.3
IUD	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Medical prescription	38.1	55.8	35.6	42.7	40.3	36.1	41.5	30.1	47.3	55.4	36.2	38.2	43.1
Fears of side effects	7.7	2.0	8.5	2.5	10.1	7.4	5.5	9.2	8.7		6.6	10.0	7.3
Ease of use, disponibility	9.0	4.3	9.7	5.9	5.9	11.4	8.3	11.7	5.1		12.3	4.7	6.4
Spouse preference	2.8	4.4	2.6	1.8	5.7	1.4	3.3	3.3	1.0		3.3	3.9	
Method's effectiveness	36.4	31.8	37.0	39.1	29.2	39.9	37.3	39.0	30.1		38.4	34.8	33.9
Non consent	1.4		1.6		4.0	0.2		0.3	5.8		0.3	2.4	3.0
Other	4.6	1.7	5.0	8.0	4.8	3.6	4.1	6.4	2.0	44.6	2.9	6.0	6.3

Oral pills	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Medical prescription	30.6	15.8	32.3	70.8	37.1	18.7	18.8	26.3	45.5	38.6	21.7	17.1	62.5
Fears of side effects	19.7	28.2	18.8		24.0	18.6	14.9	28.7	10.6		23.1	20.2	14.2
Ease of use, disponibility	24.3	26.5	24.0	4.8	18.5	32.6	37.5	21.9	17.9		31.2	24.7	12.5
Spouse preference	1.7		1.9			3.5	7.2				3.8		
Method's effectiveness	11.2	21.7	10.0		18.3	6.1	7.0	11.8	13.4	61.4	6.6	25.3	
Other	12.5	7.8	13.0	24.4	2.1	20.5	14.6	11.3	12.6		13.6	12.7	10.8
Injectables	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Medical prescription	38.3	60.0	31.0	62.0	55.9	20.4	34.3	30.3	56.6	38.4	25.4	21.0	68.4
Fears of side effects	20.2	29.3	17.3	11.6	13.9	26.7	15.0	24.3	19.7		24.6	22.9	15.4
Ease of use, disponibility	15.5		20.7		1.5	29.0	24.2	15.1	5.9		19.6	27.9	1.8
Spouse preference	9.5	10.7	9.1	26.4	11.5	4.7	11.6	6.8	11.6	61.6	3.1	10.6	9.4
Method's effectiveness	8.4		11.2		4.8	12.8	14.9	8.7			23.0		
Other	8.1		10.7		12.4	6.4		14.8	6.2		4.3	17.6	5.0
Condom	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9
Medical prescription	10.7		10.9		8.5	12.7	6.5	14.1			29.7		11.5
Fears of side effects	35.2		35.9	40.1	42.0	32.3	39.4	31.0	49.7	64.1	32.1	38.8	21.5
Ease of use, disponibility	22.2		22.6		13.1	27.9	43.3	19.6		35.9	25.5	20.3	17.8
Spouse preference	19.1		19.5	36.5	21.8	16.2	10.8	21.0	23.8		7.9	28.3	17.8
Method's effectiveness	2.7		2.8			3.9		4.1				5.6	
Other	10.1	100.0	8.3	23.4	14.6	7.0		10.2	26.5		4.8	7.0	31.3
Rhythm, withdrawal, abstinence	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Medical prescription	12.7	13.0	12.6		10.6	18.9		14.8	14.6		15.1	7.5	17.6
Fears of side effects	43.4	27.9	46.6	34.1	43.7	46.3	15.2	42.6	53.6		35.9	57.3	44.3
Ease of use, disponibility	9.6	3.7	10.9	5.9	10.4	10.3	35.1	8.4	2.5	63.1	3.9	4.2	10.9
Spouse preference	20.7	34.4	17.9	41.5	20.0	14.2	10.6	23.1	21.6		25.2	21.0	19.9
Method's effectiveness	1.5	3.4	1.1		3.8		6.4		1.4	15.8			1.8
Other	12.1	17.6	10.9	18.5	11.5	10.3	32.7	11.1	6.3	21.1	19.9	10.0	5.5

In addition, the results from the survey on family planning institutions (ENINPLAF 1996) provide extremely relevant information about the doctors' views and practices in the process of adopting a contraceptive method. Thus, 42% stated that they themselves offered it to the patient; another 23% said that the patient herself requested a particular method; while the remaining 35% said that either the patient requested the method or the doctor offered it to her. Nevertheless, when doctors who attend births or miscarriages were asked about their responsibilities regarding family planning during the post-partum or post-miscarriage period, 42% said that it was their duty to offer FP advice, orientation or information, another 24% stated that it was their responsibility to ensure that the patient left the clinic or hospital with a contraceptive method, while 10% mentioned that it was their responsibility to persuade women to use a particular method.

Moreover, contrary to current regulations, which state that women should not be persuaded to use a particular contraceptive method, a further 10% of doctors felt that it was their duty to promote and/or apply a specific method, the IUD, while 4 out of 10 of these doctors were directly responsible for inserting IUDs into all patients. Even more drastic and questionable is the fact that 29% of the doctors who attend births or miscarriages believe that inserting an IUD during the postpartum is a decision that only the doctor is qualified to make, thereby preventing women from making choices and decisions. Furthermore, and transgressing women's reproductive rights, there is a small fraction of women who were given a method without their consent. Moreover, the method used in nearly half these cases involved tying the Fallopian tubes. The women who have experienced this situation are all non-indigenous women, most of whom have failed to complete elementary school (Table 8).

Another key aspect is the timing doctors consider most appropriate for offering and adopting a non-reversible method. A quarter of all doctors believed that there was no problem in suggesting it during labour, which directly contravenes the current regulations stating that contraceptive advice must not be given when a woman is in a fragile and vulnerable state. The information given by health providers indicates that 55% of female sterilizations carried out immediately after childbirth or a Caesarean section, another 5% after an abortion and 40% at other times.

Table 9a
Proportion of users deficiently attended when contraceptive method was prescribed according to type of deficiency and reasons for choosing the method

Type of deficiency	Medical prescrip-tion	Fears of side effects	Ease of use, dis-ponibility	Spouse prefe-rence	Method's effective-ness	Other	Non consent
Were not informed about other methods	20.5	13.9	18.7	23.6	19.6	31.3	27.4
Were not given explanations about side effects	21.2	21.9	18.3	35.2	21.7	27.2	51.2
Did not understand explanations	19.0	14.6	17.5	25.2	18.8	34.8	51.2
Were not told to return in case of discomfort	14.2	11.8	6.0	18.4	15.2	29.8	27.4
Were not given enough time to inform them	20.0	17.4	12.7	29.4	20.5	28.4	27.4
Did not feel confidence to clear doubts	13.2	11.9	8.3	19.4	14.2	20.0	27.4
Did not have sufficient privacy	6.0	3.4	8.4	11.3	8.6	14.8	17.3
Were not respectfully treated	0.9	1.2	2.5	3.6	3.4		17.3
Were not satisfied with received attention	1.9	2.7	2.9	7.0	4.3	1.7	41.1

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

Table 9b
Proportion of users deficiently attended when contraceptive method was prescribed according to type of deficiency and method

Type of deficiency	Total	Ethnicity		Education			Age			Parity			
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	zero[a]	1-2 children	3-4 children	5 children or +
Total (all methods)													
Were not informed about other methods	20.1	16.2	20.7	18.5	22.0	19.0	19.6	19.1	21.2	20.0	21.6	21.9	17.1
Were not given explanations about side effects	22.3	23.7	22.0	14.5	22.4	24.4	18.9	19.4	26.4	20.0	17.5	26.2	22.2
Did not understand explanations	19.6	21.0	19.3	17.5	18.6	20.9	18.4	16.5	22.8	13.3	18.3	22.5	17.7
Were not told to return in case of discomfort	14.7	15.5	14.6	9.6	14.5	16.4	9.6	13.3	18.3	13.3	9.4	19.3	14.4
Were not given enough time to inform them	20.2	19.3	20.3	16.2	18.6	22.7	16.2	18.6	23.5	20.0	16.3	24.0	19.4
Did not feel confidence to clear doubts	13.8	12.8	13.9	13.7	13.2	14.3	11.5	11.2	17.1	6.7	12.4	14.2	14.6
Did not have sufficient privacy	7.7	4.5	8.1	4.2	7.2	9.1	4.6	7.6	9.1	13.3	7.8	9.0	6.3
Were not respectfully treated	2.3	2.6	2.2	2.7	1.7	2.6	2.3	0.9	3.5	8.3	2.8	2.1	1.9
Were not satisfied with received attention	3.6	3.9	3.5	4.6	3.3	3.4	2.6	2.2	5.2	8.3	3.0	3.2	4.2
Feminine sterilization													
Were not informed about other methods	25.8	21.6	26.5	21.0	26.1	27.6	18.4	26.2	26.1		35.2	31.3	19.7
Were not given explanations about side effects	30.3	31.5	30.1	14.5	29.8	37.7	27.5	27.2	32.2		33.9	33.3	27.5
Did not understand explanations	26.6	29.9	26.1	16.1	26.4	31.5	17.3	24.7	28.4		32.0	30.5	22.8
Were not told to return in case of discomfort	22.6	18.8	23.1	11.2	21.7	28.5	27.6	21.3	22.9		26.4	27.0	18.3
Were not given enough time to inform them	28.3	28.0	28.4	18.9	26.9	34.1	17.3	27.0	29.8		34.4	30.7	25.1
Did not feel confidence to clear doubts	20.1	17.9	20.5	14.3	20.3	22.5	17.3	18.1	21.4		26.1	20.9	18.5
Did not have sufficient privacy	10.3	7.5	10.8	3.5	10.1	13.6	8.7	10.4	10.4		19.7	12.5	7.0
Were not respectfully treated	3.3	4.2	3.1	2.4	2.5	4.5	8.7	1.1	4.0		6.7	3.4	2.5
Were not satisfied with received attention	4.8	5.5	4.7	4.4	5.3	4.5		3.3	6.0		2.5	4.7	5.4

IUD													
Were not informed about other methods	15.2	10.0	15.9	16.3	20.3	12.1	21.5	13.9	6.3		20.7	7.5	10.1
Were not given explanations about side effects	10.3	6.9	10.8	11.7	6.7	12.0	12.5	9.7	7.6		11.8	10.5	6.1
Did not understand explanations	10.2	10.5	10.2	20.1	5.4	10.8	15.8	7.2	5.8		13.6	8.6	3.3
Were not told to return in case of discomfort	3.3	8.5	2.5	5.1	0.4	4.5	4.2	2.9	2.4		3.0	5.3	1.0
Were not given enough time to inform them	11.5	13.1	11.2	15.4	7.6	12.7	14.0	12.1	5.8		11.7	16.2	4.4
Did not feel confidence to clear doubts	5.8	8.0	5.5	11.2	2.7	6.5	9.8	3.3	3.4		8.4	3.5	2.2
Did not have sufficient privacy	3.3	1.8	3.5	4.3	2.2	3.7	2.2	3.5	4.7		3.2	3.0	4.0
Were not respectfully treated	0.9	1.1	0.8	4.3		0.6	0.6	0.3	2.4		1.6		
Were not satisfied with received attention	1.5	1.8	1.5	5.4		1.6	1.1	1.5	2.4		2.0	1.4	0.5
Oral pills													
Were not informed about other methods	8.5		9.5		7.7	10.5	10.3	10.8	3.5		8.4	13.8	2.0
Were not given explanations about side effects	10.9	36.0	8.0		8.9	14.3	23.2	8.1	5.5		20.1	5.0	1.8
Did not understand explanations	9.4	7.8	9.6	11.6	2.4	15.7	26.2	4.5	4.0		16.8	2.5	5.1
Were not told to return in case of discomfort	9.7	10.7	9.6		6.1	14.5	19.0	9.4	3.2		15.1	8.6	1.8
Were not given enough time to inform them	12.0		13.4		2.4	22.8	32.0	9.0	1.4		21.1	7.4	1.8
Did not feel confidence to clear doubts	6.3	7.8	6.1	11.6	2.4	9.2	16.8	2.5	4.0		11.4		5.1
Did not have sufficient privacy	3.9		4.4			8.2	4.6	5.3	1.4		4.1	5.6	1.8
Were not respectfully treated	1.0		1.1			2.1		1.2	1.4		1.3		1.8
Were not satisfied with received attention	1.9		2.1			3.9	3.6	1.2	1.4		3.2		1.8
Injectables													
Were not informed about other methods	15.3	18.3	14.3		13.9	19.3	13.8	14.8	17.8		21.9	4.4	18.8
Were not given explanations about side effects	27.1	34.0	24.7	11.6	38.6	21.9	41.0	15.9	28.7		18.3	42.5	19.9
Did not understand explanations	23.1	17.6	24.7	37.9	19.5	22.5	21.7	22.7	25.6		22.0	27.5	15.0
Were not told to return in case of discomfort	18.9	18.8	18.9	15.1	27.4	13.5	13.8	17.5	27.3		16.0	22.0	22.0
Were not given enough time to inform them	13.8	5.5	16.6		14.3	16.1	17.5	14.9	7.7		9.5	16.3	10.6
Did not feel confidence to clear doubts	12.2	4.6	14.8	11.3	10.2	13.8	9.0	11.6	17.1		17.8	4.4	13.8
Did not have sufficient privacy	13.4		17.9		13.9	15.6	9.0	21.4	5.4		20.5	16.3	4.4
Were not respectfully treated	0.6		0.8		1.6			1.4				2.2	
Were not satisfied with received attention	4.6	4.6	4.5	11.3	1.6	5.4	9.0	1.4	4.5		7.6	2.2	3.6

a. The number of cases is insufficient to disaggregate by method. Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

The lack of information and clear, comprehensive explanations given to women is the result of diverse factors that prevail on the supply side, among service providers and health institutions, which might be exacerbated in marginal and poor areas. Limited evidence from survey data illustrates the unfavourable service providers' attitude towards the patients. These include their perception of women's inability to understand the way contraceptive methods work[28], or their reticence to clarify patients' doubts and to provide them with indications about what to do in the event of discomfort or problems resulting from contraceptive use. There are other factors related to working conditions that are mentioned by service providers, such as the short time available during medical consultation for providing patients with essential information on the benefits and consequences of the specific method adopted[29], the lack of contraceptive supplies, as well as the limited variety of non-reversible methods offered, which place additional restrictions on women's range of choices[30].

The above findings speak for themselves and merely constitute a limited, vague and uncertain illustration of the degree of freedom and options that women have regarding the method to be chosen, and the questionable practices regarding the conditions that prevail for making an informed free choice. Moreover, they probably reflect some of the deficiencies in the quality of care received by women when choosing a contraceptive method. These are aspects that warrant further research in order to have a more comprehensive and precise picture of the unmet needs in the circumstances and social actors that influence women's options.

Another proxy-analytical way to determine women's unmet needs regarding their contraceptive practice is to consider the reasons for non-use of contraceptives. Of all the women of childbearing age, 59%

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28. Although virtually all doctors said that it is important for patients to understand the way contraceptive methods work, half of them estimate that around 20% of their patients are unable to do so.

29. Twenty percent of women users mentioned the shortage of time during medical consultation; and 13-14% stated their lack of confidence in doctors' ability to clarify their doubts and the absence of indications of what to do in the event that they experienced discomfort (see Table 9a).

30. Although health institutions deal with an average of 3.7 contraceptive methods – ranging from 3.1 to 5 methods – during the three months prior to the 1996 survey, 32% of the medical rural units were not able to provide one or more of the methods they offer.

do not use any method to prevent pregnancy. Of this group, 46% have never used any method while the remaining 13% have used it in the past. Indigenous women are the most vulnerable since the great majority are not current users (71%). Among the reasons for not using a contraceptive method, it is possible to distinguish five groups of situations in which there are important differences between non-indigenous and indigenous women (see Table 10). A first group refers to their own, their husbands' or their religion's disapproval (6% of non-indigenous and 18% of indigenous women)[31]. A second group addresses more specific reasons related to women's unmet needs, such as the fear of secondary effects of methods, and the lack of knowledge about them (5% and 12% respectively). A third includes women who reported not having sexual relations, such as single women (mostly adolescents and younger women), widows, divorcees and those that were separated, as well as married women whose partners were temporarily absent or women that reported not having sexual relations (59% non-indigenous and 28% indigenous). The fourth group comprises breast-feeding women (5% and 10% respectively) who due to the exclusive nature and segmented orientation of the FPP are not being conceived as having specific and different contraceptive unmet needs. The last group includes pregnant women (11% and 8% respectively) and those that wish to conceive (4% and 7% respectively).

At the same time, reasons for not using a contraceptive method vary according to other women's characteristics. For instance, fear of secondary effects of methods increases with age and parity and is greater among former users than never users, which is probably due to the women's greater awareness and better information; although it might respond more to the negative experience they have had when they used them.

Despite the reservations and restrictions concerning women's stated expectations regarding the use of a contraceptive method in the future, it is interesting to note that at the time of the survey, over half the non-users intended to use contraception in the future (56%). There are, however, sharp variations between the various groups of women. Although 61% of non-indigenous non-users planned to practice contraception in the future, the percentage of indigenous women with the

31. Unfortunately, the survey did not inquire about the meaning of the women's or their husbands' disapproval.

Table 10
Reasons for not using any contraceptive method

	Total	Ethnicity		Education			Age			Parity				Use status	
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem.or +	15-24	25-34	35-49	zero[a]	1-2 children	3-4 children	5 chldren or +	Never users	Ex-users
Never users	45.5	58.4	42.6	52.5	35.1	49.8	71.5	29.8	29.5	96.6	28.1	20.4	28.3		
Ex-users	13.1	12.2	13.3	13.9	15.3	11.4	8.3	18.2	14.0	1.7	21.7	18.0	13.2		
Current users	41.4	29.4	44.1	33.6	49.6	38.8	20.2	52.1	56.6	1.7	50.2	61.6	58.5		
Reasons	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Own/spouse disagreement	8.9	17.5	6.3	19.9	9.5	4.3	3.7	13.7	15.0	5.2	6.9	15.7	25.9	9.6	5.7
Do not know methods	2.4	7.5	0.9	5.7	2.5	1.0	1.4	3.7	2.9		1.9	5.0	4.9	3.0	
Fear of side effects	4.4	4.6	4.3	4.3	8.2	2.4	1.4	6.2	9.3	1.4	3.8	10.4	10.8	2.7	10.2
Non-married	46.5	24.6	52.9	17.7	32.4	64.8	68.4	26.0	19.9	5.4	20.4	10.2	8	57.1	10.6
Partner temporarily absent	3.9	1.3	4.7	1.6	5.9	3.9	2.5	7.1	3.9	2.4	10.9	7.6	2.6	1.9	11.2
Married without sexual relations	1.5	2.0	1.4	1.4	2.3	1.2	0.9	1.1	3.4	0.9	1.5	4.2	2.1	0.9	3.5
Breast-feeding	6.0	10.1	4.8	10.0	8.9	3.0	5.1	8.7	4.9		12.6	9.2	10.9	5.1	9.1
Non-fertile/menopausal	9.2	14.5	7.6	20.7	11.8	3.4	1.0	7.5	29.4	22.2	11.5	11.6	20.0	8.1	12.9
Pregnant	10.7	8.4	11.4	8.8	11.1	11.2	11.2	15.5	4.4	40.8	19.0	17.5	7.1	6.4	25.6
Child wanted	4.4	6.6	3.8	6.3	5.1	3.4	2.7	7.9	4.5	15.8	8.4	6.9	3.2	3.7	7.0
Other	2.1	2.9	1.9	3.6	2.3	1.4	1.7	2.6	2.4	5.9	3.1	1.7	4.5	1.5	4.2

a. Refers only to once married or once pregnant women.
Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

Table 11
Current use and future intentions to use contraceptives

	Total	Ethnicity		Education			Age			Parity				Use status	
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	zero	1-2 children	3-4 children	5 children or +	Never users	Ex-users
Current users	41.4	29.4	44.1	33.6	49.6	38.7	20.2	52.1	56.4	1.7	50.2	61.3	58.5		
Non-users	58.6	70.6	55.9	66.4	50.4	61.3	79.8	47.9	43.6	98.3	49.8	38.7	41.5	100.0	100.0
Intend to use in the future	33.0	26.5	34.3	24.8	23.7	41.0	55.2	24.9	11.4	60.1	30.0	18.3	17.1	53.2	66.5
Do not intend to use in the future	15.9	26.1	13.6	28.6	19.1	10.1	8.9	15.6	27.7	14.9	13.4	16.5	19.7	27.1	27.1
Undecided	9.7	18.0	8.0	13.0	7.6	10.2	15.7	7.4	4.5	23.3	6.4	3.9	4.7	19.7	6.4
Reasons for not using contraceptives in the future	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Own/spouse disagreement	19.3	24.8	16.9	24.0	15.4	19.2	24.4	25.4	12.7	17.1	12.4	19.0	26.0	16.5	21.5
Child wanted	11.7	16.5	9.8	15.0	8.4	12.6	6.6	21.2	7.9	7.0	18.1	20.3	4.5	10.1	13.0
Fear of side effects	16.2	9.0	19.2	3.6	23.2	19.3	22.1	14.2	14.9	13.1	18.7	16.1	17.6	16.3	16.3
Without partner or sexual relations	21.0	13.0	24.3	13.8	27.4	19.8	20.7	14.1	25.6	24.4	29.0	17.2	15.5	25.8	16.8
Infertile or difficulties to get pregnant	8.5	4.3	10.3	10.7	7.9	7.4		3.8	15.6	7.0	11.6	5.6	10.2	10.0	7.3
No intention to marry or have sexual relations	8.9	12.4	7.4	11.1	5.4	11.3	7.4	7.4	10.6	15.7	4.5	8.6	5.8	7.2	10.4
Other	14.4	20.0	12.1	21.8	12.3	10.4	18.8	13.9	12.7	15.7	5.7	13.2	20.4	14.1	14.7

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

same intention was barely 38%. The diverse future scenarios are linked to the current stage of life of non-users. Older women and those with higher parity and no schooling shared these expectations to a lesser extent (26% to 41%), while two thirds or more of the younger, more educated non-users and former users, planned to use contraception later on (Table 11).

Finally, reasons for non-use of a contraceptive method in the future are related to women's current circumstances, reflecting the obstacles and barriers they face in meeting their reproductive and contraceptive needs. A fifth of the women did not plan to use contraception either because they did not have a partner or did not engage in sexual activity. Another fifth of women refer to the persistence of current values and attitudes, such as their own or their partner's opposition to using contraceptive methods, a fact which was more common among indigenous women, those without schooling, those with higher parity and, surprisingly, younger women, as well as former users. It is striking, although not surprising, that fear of side effects of methods is the third most important reason for non-use in the future, particularly among younger women and those who have not completed elementary school (22% and 23% respectively).

3.6. Unmet needs regarding access and quality of reproductive events: Under which conditions?

As has been stressed by the Programme of Action endorsed at the International Conference on Population and Development held in Cairo, key aspects of women's reproductive health concern the access and quality of care they receive during pregnancy, childbirth and postnatal periods. Although Mexican public health institutions have a long history of providing health services to a vast majority of its population dating from 1940, it was not until the implementation of FPP that they and their service providers were granted almost exclusive responsibility over reproductive events and fertility control. This has led to the medicalization of procreation, a process in which these events became spheres of intensive influence where the medical rationale and practices have been imposed. Despite the extended and massive institutional FP coverage provided for most of the population's socio-economic groups, there are still significant institutional, economic, social, cultural and even familial and personal barriers that prevent many women from

being able to effectively have access to quality health services in order to ensure safe pregnancies and childbirth. In this section we mainly address some of the service attendance conditions received by women during their pregnancy and childbirth periods, conditions that could also be viewed as part of the practices offered by service providers. The data refer exclusively to women whose last live-born child was born between 1994 and 1999.

3.6.1. Prenatal care

Prenatal care is a crucial factor in ensuring both that women have safe pregnancies and childbirth and that the results of their pregnancies are successful for the survival and wellbeing of mother and child. In general terms, the provision of this type of care is mainly oriented towards detecting and dealing with high-risk situations, referring women with specific risks to specialised health services and providing safe, timely care and treatment for any ailments that occur during pregnancy. Thus, while it is important for women to receive prenatal care, it is even more crucial to know what stage of their pregnancy they begin to receive it at, the frequency with which they receive it and the quality of the care offered. As stated earlier, it also represents a period where service providers promote and encourage women to adopt a contraceptive method.

Although prenatal care now seems to be a more universal practice characterised by a growing process of medicalization[32], there are still considerable sectors of pregnant women who do not receive medical care, receive it late or less often than recommended or are given poor quality medical care. Indeed, findings on Table 12 show that although the majority of women were attended by a health agent during their last pregnancy, 5% did not receive any type of prenatal care, with indigenous women and those with no schooling accounting for the highest percentage (11%).

Similarly, the intense medicalization of prenatal care is evidenced by the fact that four out of every five pregnancies were attended, at least once, by a doctor (exclusively or in combination with other health agents) and another 3% by paramedical staff (such as a nurse, health

32. Between 1974 and 1976, health agents attended 67% of pregnancies, a figure that rose to 92% from 1994-1997 (CONAPO, 2001).

Table 12
Last pregnancy attendance. Women with child born alive during 1994-1999

	Total	Ethnicity		Education			Age			Parity		
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	1-2 children	3-4 children	5 children or +
% of women with prenatal care on last pregnancy	95.0	89.4	96.8	89.4	96.4	96.6	94.7	95.9	93.6	96.2	96.3	92.3
Prenatal care providers (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Doctor	55.8	32.3	63.1	30.1	55.5	68.2	55.7	54.3	58.5	62.0	53.5	50.7
Doctor and other institutional agent	12.2	10.0	12.8	9.5	12.3	13.0	14.1	12.2	9.6	14.3	12.6	9.3
Doctor and midwife	11.9	16.4	10.6	19.7	11.4	9.0	12.8	11.9	11.0	10.6	12.8	12.5
Other institutional health agent	2.4	4.8	1.6	2.0	2.7	2.3	2.3	3.1	1.2	2.6	2.2	2.3
Midwife and other inst. health agent	0.9	1.5	0.8	0.6	1.5	0.6	1.3	0.9	0.5	0.8	0.8	1.3
Midwife	11.8	24.4	7.9	27.5	13.0	3.5	8.5	13.5	12.8	5.9	14.4	16.2
Without prenatal care	5.0	10.6	3.2	10.6	3.6	3.4	5.3	4.1	6.4	3.8	3.7	7.7
Timing of first checkup (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
First trimester	62.8	50.2	66.4	41.3	62.8	72.1	66.0	65.8	52.7	72.0	62.7	51.1
Second trimester	32.5	39.8	30.4	45.2	33.2	26.5	30.5	29.7	40.7	24.6	34.6	40.4
Third trimester	4.7	10.0	3.2	13.5	4.0	1.4	3.5	4.5	6.6	3.4	2.7	8.5
Mean month at 1st checkup	3.6	4.0	3.2	4.2	3.3	3.0	3.2	3.3	3.6	3.1	3.2	3.8
Number of checkups during last pregnancy (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1-2 times	6.0	13.1	3.9	12.8	4.3	4.3	6.0	4.9	7.9	5.8	3.9	8.4

3-4 times	19.8	21.4	19.4	29.5	21.7	14.3	17.5	18.5	25.6	14.4	17.8	29.1
5 times or more	74.2	65.5	76.7	57.7	74.0	81.4	76.5	76.6	66.5	79.8	78.3	62.5
Mean of times	6.3	5.7	6.5	5.2	6.2	6.9	6.5	6.5	5.9	6.7	6.5	5.7
% of pregnant women with prenatal care according to Mexican norm[a]	50.4	33.5	55.7	25.3	50.6	62.1	53.7	54.4	39.0	61.3	52.5	35.1
Quality of attention (%)												
Had blood pressure taken	86.7	70.9	91.3	68.3	85.4	95.8	91.2	85.2	84.0	94.4	84.4	79.4
Was weighted	85.2	68.4	90.1	64.9	84.7	94.6	90.6	84.5	79.8	93.4	83.3	77.0
Was given tetanus jabs	89.6	81.6	92.0	76.4	90.4	94.9	93.3	87.5	89.2	93.9	85.2	88.9

a. Refers to women that have had their first checkup during the first trimester and at least five checkups along pregnancy.
Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

worker or community promoter). Nevertheless, a significant group of pregnant indigenous women and those with no schooling found themselves in a more vulnerable situation regarding medicalized prenatal care: only 59% in both cases were attended by a doctor, while another 6% and 3% respectively received attention from a paramedic during their last pregnancy. The persistence and importance of prenatal care provided by midwives, either as the only agents who attended pregnancies or combined with medical care, is a relevant feature, mainly among indigenous women and those without schooling. The greater confidence in midwives, the warm care they provide that is also related to women's habits and cosmovisions, the difficulties and costs of obtaining access to medical care, as well as women's previously unsatisfactory attendance by medical staff, are among the reasons that lay behind the fact that midwives intervened in prenatal care in one fourth of all pregnancies (42% of indigenous women and 48% without schooling). They were the only agents who attended 12% of all pregnancies (24% and 28% respectively), and the remainder in combination with other agents.

Other conventional elements for assessing access to quality services during pregnancy are the timing of the first medical visit, the frequency of prenatal checkup and the exams and treatments received by women. The findings allow for a rough picture of the heterogeneous conditions among women in marginalised rural areas: only 63% of all pregnant women were attended during the first trimester, a third were attended for the first time during the second trimester and 5% during the third one. Despite the fact that pregnant women received an average of 6.3 checkups during their last pregnancy, 6% had just one or two checkups while 20% were given three or fourth medical revisions. However, the majority of women (85% to 89%) stated that they have received some kind of exams and treatments during their prenatal stage (measuring blood pressure, weight control and tetanus jabs).

Once again, the inferior conditions of access to quality prenatal care prevail among women without schooling, the indigenous ones, and those with higher parity and older than 35 years old (see Table 12). Suffice it to say that when considering the proportion of women who were given prenatal care during their last pregnancy, as well as the timing of first checkup and the number of times they had checkups, a large majority of women with no schooling, indigenous women and the oldest ones and with highest parity did not receive the minimum and required attention established by the official Mexican medical standards

(75%, 67%, 65% and 61% respectively, versus 50% as average for all women)[33]. Moreover, nearly a third of indigenous women and those with no schooling (30% and 35% respectively) were never weighed or had their blood pressure taken and 18% and 24% respectively were not given tetanus jabs.

Given the above findings, can we say that the prenatal needs of women in marginalised rural areas are being met? If only the total proportion of women given prenatal care is regarded (95%) the picture obtained is misleading. As shown above, the existence of unmet needs emerges when one analyses the details of the care received by women, as well as the differences in their sociodemographic characteristics.

3.6.2. Childbirth attendance

Delivery care services play undoubtedly a crucial role in the health, survival and wellbeing of mothers and their children. This has been one of the most hotly debated issues not only as regards the availability of and access to quality services, but also as regards women's self-determination and their reproductive rights, due to some of the questionable medical practices or malpractice during this stage that have been documented by researchers, particularly women's NGOs.

The process of medicalisation of childbirth attendance in Mexico has been considerable over the past three decades[34]. However, especially in rural and marginalised areas, there are still social, economic, cultural, institutional, familial and personal barriers that lead women to have their childbirth attended outside the institutionalised medical sphere in conditions that are not always safe for either their health or that of their children. Survey data is unable to analyse this issue in depth or to provide detailed information on the specific experiences women have had during their last childbirth, but their findings illustrate some of the main obstacles that prevent women from having their deliveries attended by health institutions.

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33. The Official Mexican Standards for women's care during pregnancy, childbirth, puerperium and newborn babies state that women should receive at least five prenatal checkups.

34. The proportion of births attended by a doctor rose from 55% between 1974 and 1976 to 82% between 1994 and 1997. For rural areas the corresponding percentages were 38% in 1987 and 59% in the last period (Dirección General de Planificación Familiar, 1989; CONAPO, 2001).

Table 13
Characteristics of last delivery attendance. Women with last live-born child in 1994-1999

	Total	Ethnicity		Education			Age			Parity		
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	1-2 children	3-4 children	5 children or +
% of women who had a live-born child in 1994-1999	48.2	61.3	45.2	58.9	51.3	42.6	37.9	71.6	37.7	76.1	67.0	58.5
Delivery attendance	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Doctor	55.4	25.3	64.7	21.3	51.4	74.7	60.0	56.2	48.1	69.5	54.1	39.6
Paramedic	3.8	3.4	4.0	3.7	3.2	4.4	4.2	3.2	4.6	3.2	4.8	3.5
Midwife	35.5	57.2	28.7	61.4	42.0	18.1	31.4	35.2	41.0	25.2	34.1	49.4
Relative, friend	3.3	9.4	1.4	7.9	2.5	1.6	4.0	2.6	3.7	1.6	4.4	4.2
Nobody	2.0	4.7	1.2	5.7	0.9	1.2	0.4	2.8	2.6	0.5	2.6	3.3
Place of attendance	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Public medical units	45.1	26.7	50.9	21.4	43.1	58.0	49.5	45.5	39.0	56.4	44.6	32.1
Private medical units	13.1	1.4	16.7	1.8	10.8	20.2	13.5	13.5	11.6	16.1	12.9	9.6
Private house (woman's, mid-wife's or relative's)	41.5	71.4	32.2	76.2	45.9	21.5	37.0	40.6	48.9	27.4	42.5	57.4
Other place	0.3	0.5	0.2	0.6	0.2	0.3		0.4	0.5	0.1		0.9
% of women attended at the local clinic	19.7	16.7	20.6	14.2	19.0	22.8	22.5	19.7	16.1	25.0	19.1	14.0
Reasons for not being attended in the local clinic												

Total	80.3	83.3	79.4	85.8	81.0	77.2	77.5	80.3	83.9	75.0	80.9	86.0
Need for specialized care	13.3	6.7	15.4	5.0	12.8	17.7	14.4	11.9	14.6	15.1	14.0	10.5
Affiliated to a health institution	8.7	10.0	8.3	6.7	7.4	10.7	8.5	9.0	8.5	9.2	9.5	7.4
Fear or lack of confidence	3.6	2.1	4.0	1.8	2.8	5.0	3.3	3.7	3.7	3.9	2.7	4.2
Obstacles to reach the clinic	14.2	22.5	11.6	21.2	16.9	8.8	12.4	13.1	18.4	9.3	13.2	21.2
Doctor's absence	16.6	9.7	18.8	13.6	17.9	17.1	15.6	16.9	17.4	13.1	19.1	18.3
Embarrassment to be seen by a doctor	1.8	2.2	1.7	2.8	2.1	1.1	1.9	1.6	2.1	1.3	1.8	2.4
Midwives preference or custom	11.3	24.4	7.2	27.3	10.0	4.7	9.7	12.0	12.1	8.2	11.3	15.0
Partner or relative decision	1.3	1.3	1.2	0.7	2.0	1.0	3.0	0.6	0.4	2.3	0.8	0.4
Living in other locality	6.6	2.2	8.0	4.4	3.9	9.7	6.9	8.6	2.5	10.4	5.8	2.8
Other	2.9	2.2	3.2	2.3	5.2	1.4	1.8	2.9	4.2	2.2	2.7	3.8
% with post-partum attendance	59.0	51.9	61.2	52.5	54.5	65.6	61.6	59.4	55.2	65.1	60.6	50.1

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

Without underestimating the efforts and achievements of Mexican health institutions in this respect, just over half of women's deliveries of their last live-born children (that took place between 1994 and 1999 in rural marginalised areas) were attended by a doctor (55%), while 36% were attended by a midwife and 4% by a paramedic. Another 3% of births were attended by a relative or friend while 2% of women gave birth alone, without any form of care or assistance. The lack of medical care during delivery is particularly acute among women without schooling and indigenous women: only 21% and 25% consulted a doctor, another 57% and 61% were attended by midwives, 8% and 9% were assisted by a relative or friend and 5% and 6% gave birth on their own (see Table 13).

What is also striking and should be underlined is the fact that despite having received prenatal care from an institutional service provider, a high proportion of women still choose and prefer a midwife to attend their deliveries. This may be due to the fact that midwives are the only available alternative: two out of every three women (66%) who received medical prenatal care had their deliveries attended by a doctor, whereas 28% resorted to midwives (see Table 14). Of the small percentage who had pregnancies supervised by a paramedic, 37% had their deliveries attended by a midwife. Conversely, the last delivery of 90% of the women who were given prenatal care by midwives was also attended by the latter, while only 5% were attended by a doctor. Of

Table 14
Comparison between prenatal and delivery attendance according to service providers

Delivery attendance	Last pregnancy care			
	Doctor	Paramedic	Midwife	Without prenatal care
Doctor	65.8	21.5	5.2	29.8
Paramedic	3.5	26.7	1.3	0.5
Midwife	28.0	36.6	89.8	25.7
Relative, friend	2.0	15.2	0.9	21.1
Nobody	0.7		2.8	22.9
Total	100.0	100.0	100.0	100.0

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

those who did not receive prenatal care, 30% were attended by a doctor during delivery, 26% by a midwife, 21% were helped by a friend or relative, and 23% gave birth alone.

The place where delivery takes place is also important, both because of the conditions of hygiene and because of the infrastructure available (such as human resources, equipment, instruments and drugs), which may be required in the event of complications during labour. Although 45% of the deliveries were carried out at public medical units, a similar proportion gave birth in private houses (whether it was the woman's, the midwife's or a relative's house). Likewise, despite the precarious socioeconomic conditions of women in these areas, 13% gave birth at private medical units, most of whom were non-indigenous and more highly educated women. Conversely, 71% and 76% of indigenous women and those with no schooling had their last delivery in a private house and only 28% and 21% at a public or private health institution (Table 13).

Linked to the above, and contrary to commonly-held misconceptions, it is interesting to point out that the mere availability of health services in these marginalised areas does not ensure childbirth attendance at a medical unit. In fact, despite that half of the women interviewed live in localities where at least one public clinic (belonging to the IMSS-Solidarity Program) exists, and although the remaining half have medical services through this program's agents who periodically visit their localities, and theoretically have access to a relatively close public clinic where they can be attended, only a very low proportion of women (20%) have had their last delivery at the clinic assigned to them[35]. The vast majority (80%) were attended either in a medical unit other than the one assigned to them or in a private home.

The reasons women gave for not seeking or being attended at their local clinic are mainly of an economic and cultural nature, and largely related to the adverse conditions of the public medical services offered in marginalised settings and the obstacles women face in gaining access to them. Thus, one out of every eight women (13%) did not have their last delivery at their local clinic because of their need for obtaining specialised medical services at a unit with a larger and better medical infrastructure, either because they had a high-risk pregnancy,

35. Henceforth, the appropriate clinic (IMSS-Solidaridad clinic) is referred to as the local one.

had had complications in previous deliveries, required Caesarean sections or wanted to have their tubes tied after the delivery. Another 11% had more faith in the services provided by midwives. Moreover, 16% did not have their deliveries at their local clinic because of the lack of medical personnel at the time of delivery. An additional 14% failed to reach the clinic at the time of delivery because of the distance and lack of transport, or because they could not afford to pay for transport or had no-one to take them, while 4% did not trust the services provided by the clinic (Table 13). In short, at least 34% of the women did not have their deliveries where they were supposed to because of their distrust and lack of confidence in the services offered, the practical difficulties of getting there or the lack of personnel.

These difficulties are exacerbated among indigenous women and those without schooling: their reasons for not having their last delivery attended in the local clinic are their preference for and greater trust in midwives (24% and 27%) and the obstacles for reaching the clinic (21% and 22%). However, the lack of a doctor (17% and 19%) and, to a lesser extent, the difficulty of getting to the clinic (9% and 12%), as part of the main reasons given by non-indigenous women and those with more schooling also reveal the adverse conditions faced by women in these marginalised rural areas.

Finally, the frequency and therefore excessive number of Caesarean sections and sterilizations are other crucial aspects linked to the quality of care during delivery at the health clinics and may be regarded as an indicator of institutional poverty and malpractice[36]. According to the medical rationale that largely prevails in Mexican health context, having had two Caesareans is one of the main reasons used by service providers to persuade women to be sterilized. Although the survey data we have analysed do not include specific questions about women's attitudes regarding these practices, findings from other surveys and mainly qualitative studies have shown that these medical practices are one of the main obstacles to having their deliveries at health institutions (Lerner *et al.*, 1994).

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36. Regarding the Caesarean practices it is worth noting that although health regulations state that the percentage of deliveries involving Caesarean sections should not exceed 20%, findings from the ENINPLAF survey show that by 1996 a total of 29.4% of all deliveries carried out during the previous month had been carried out by Caesarean sections (see also footnote 13 for other estimates of Caesarean sections).

The above findings illustrate the long way Mexico still has to go to achieve safe childbirth attendance. This should not be seen only as a simple quantitative problem of shortage of health services, but primarily as a problem related to the inability to offer the type of health services required in the places where they are needed, as well as to the need to eliminate the barriers and obstacles that have prevented a significant proportion of women from gaining access to these services even though they exist.

3.7. Unmet needs in women's reproductive health diseases

Within a broad concept of reproductive health, which includes the set of processes associated with reproduction, sexuality and sexual health and goes beyond family planning and maternal and child health, another important dimension is the prevention, timely detection and treatment of certain illnesses and disorders that may compromise the general state of women's health as well as the exercise of their sexuality and reproductive capacity. Foremost among these diseases, both because of their adverse implications and their rate of incidence, are infections of the reproductive tract, sexually transmitted diseases, HIV/AIDS, as well as cervico-uterine and breast cancer, topics that, aside from HIV/AIDS, have been underresearched and for which limited data is available. In this section we therefore give a very broad picture, based mainly on the knowledge and awareness that women have of certain preventive practices related to these diseases, in order to illustrate some of women's unmet needs regarding these reproductive issues.

Infections of the reproductive tract and sexually transmitted diseases (STDs) constitute a significant health problem among women, both in themselves and because of their implications for women's health and that of their children and for achieving reproductive ideals, as well as through their potential role in facilitating the acquisition of other diseases such as certain forms of cancer and HIV-AIDS.

The incidence of vaginal discharge (VD) among women in marginalised rural areas is difficult to gauge, since it is closely linked to women's knowledge, awareness and access to information and health care services. This is a field where health care services have a major role to play, not only in its treatment but also in enabling women to recognise its presence and determine whether it is normal or poses a health risk, an aspect that has yet to be dealt with in Mexican society.

Findings in Table 15 indicate some of the adverse circumstances that women in marginalised rural areas face regarding this issue. VD incidence seems relatively high: one third of all women admit that they have had it at least once in their lives, ranging from 45% to 22% among current contraceptive users and non-users. Although most women felt it was abnormal to have VD (79% of all women), it is important to note that a considerable proportion of women who had had it over the last five years failed to seek medical attention (25%). A significant proportion of women did not seek medical attention because they thought that this was normal or unimportant (47% and 13% respectively) or because they were embarrassed or had problems in obtaining access to health services (25% and 11%). Ethnic differences show that indigenous women are less aware of having had VD than non-indigenous ones (17% and 35% respectively) and that a smaller proportion of the former sought medical attention. Conversely, more educated women, older ones and women with higher parity, who are supposedly most aware, better informed about the health risks involved, were most likely to realise that they had had vaginal discharge.

As regards STDs, the differences between indigenous and non-indigenous women and those with no schooling or higher educational attainment who have heard about them are also very meaningful (39% and 80% in the first case and 44% and 83% in the second) (see Table 16). However, having heard about STDs does not always mean that women know how to prevent them. Thus, of the women who knew about these diseases, half of them realised that condoms were a means of preventing them (58%), although only a third of indigenous women and of those with no schooling were able to identify them. Engaging in sexual relations with a single partner is the second most frequently recognised way of preventing STDs (32%), with little variation between women of different ages, levels of schooling and those who did or did not speak indigenous languages. The remaining ones did not know how to avoid them (15%) – particularly indigenous women (35%) – and cited questionable means of preventing infection, such as abstaining from sexual relations (14%) or demanding their partners' fidelity (9%).

A similar situation prevails as regards the Acquired Immune-Deficiency Syndrome (AIDS). Although it is better known than STDs (86% of women had heard about it), it is also less well-known among indigenous women and those with no schooling (52% and 60%). More striking are the findings about women's perception regarding the

Table 15
Vaginal discharges (VD)

	Total	Ethnicity		Education			Age			Parity				Contracept. status	
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	zero	1-2 children	3-4 children	5 children or +	Non-users	Users
% of women with VD at least once	31.3	16.7	34.7	22.8	35.8	31.4	22.3	36.2	37.4	14.1	38.9	38.5	36.5	21.6	45.0
% considering it is normal to have VD	20.6	34.3	17.5	25.5	18.9	19.9	24.7	19.0	17.1	25.7	16.1	21.5	19.0	24.5	15.1
Have had VD	18.4	27.9	17.4	17.7	17.6	19.2	27.8	15.6	14.3	34.0	16.6	18.7	13.4	20.9	16.8
Never had it	21.6	35.6	17.6	27.9	19.7	20.3	23.8	20.9	18.8	24.3	15.7	23.2	21.2	25.5	13.7
% of women with VD in the last 5 years	28.3	14.4	31.5	20.0	31.0	29.5	21.3	33.9	31.2	13.2	37.0	35.3	30.5	19.5	40.7
Sought for medical attention	21.3	9.2	24.1	15.0	25.1	21.2	13.1	27.9	24.7	5.7	30.1	28.4	23.9	12.9	33.1
Did not seek for medical attention	7.0	5.2	7.4	5.0	5.9	8.3	8.2	6.0	6.4	7.5	6.9	6.9	6.5	6.5	7.6
Reason given for not seeking medical attention	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
It is normal	47.3	44.7	47.7	21.4	43.3	54.5	51.5	41.3	46.4	60.2	41.3	44.5	39.5	49.6	44.5
It is not an important problem	12.5	16.0	12.0	14.3	14.6	11.2	7.4	16.0	17.2	3.5	23.7	16.8	8.9	11.1	14.3
Embarrassment	25.2	23.4	25.5	47.4	29.6	18.7	26.2	26.9	22.2	24.2	20.6	23.2	33.1	29.0	20.6
Problems in access to health services	11.0	2.9	12.3	16.9	5.4	12.3	10.7	11.4	11.2	5.9	14.4	13.8	11.5	4.7	18.7
Other	4.0	13.0	2.5		7.1	3.3	4.2	4.4	3.0	6.2		1.7	7.0	5.6	1.9

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

Table 16. — Sexually transmitted diseases (STDs)

	Total	Ethnicity		Education			Age			Parity				Contracept.	
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	15-24	25-34	35-49	zero	1-2 children	3-4 children	5 children or +	Non-users	Users
% having heard about STDs	72.7	39.1	80.2	44.0	71.9	83.0	71.5	76.7	70.0	73.9	73.2	76.6	67.2	66.5	81.3
% knowing means to prevent STDs															
Condom use	57.9	33.9	60.5	32.6	49.9	66.8	57.9	59.3	56.3	58.8	59.6	60.4	52.3	54.3	62.0
Pills or ovule use	0.9		1.0		0.6	1.2	1.1	0.8	0.6	1.1	0.6	1.4	0.4	0.7	1.0
Sexual relations with a single partner	31.4	28.8	31.7	30.7	30.9	31.8	29.9	32.3	32.3	29.5	32.9	30.1	33.5	30.4	32.5
Demand partner's fidelity	8.6	9.6	8.5	11.1	7.4	8.8	5.8	10.3	10.2	5.5	10.1	10.3	9.0	6.8	10.7
Abstinence	13.9	10.0	14.3	12.7	11.3	15.6	16.1	13.6	11.6	19.2	13.2	13.7	8.3	16.8	10.6
Do not know	15.1	34.9	13.0	30.1	17.6	11.0	15.1	16.2	13.9	13.6	14.7	13.9	18.6	16.5	13.6
Another way	2.6	3.3	2.5	1.9	3.0	2.5	2.3	2.0	3.6	2.2	2.4	3.0	2.9	2.6	2.6
% of women having heard about AIDS	86.3	51.8	94.2	59.7	87.4	94.7	86.9	85.8	86.0	87.6	89.2	86.0	82.2	81.0	93.7
% knowing means of acquiring AIDS															
Sexual contact	77.1	59.0	79.4	58.1	72.8	83.8	76.1	79.6	76.0	78.7	78.4	81.0	70.4	75.6	79.0
Blood transfusion	34.8	12.4	37.7	12.1	26.7	44.5	33.2	38.2	33.6	38.8	36.2	37.6	26.3	31.6	38.8
Needles or syringes	24.5	9.0	26.5	7.9	19.0	31.4	25.9	25.2	22.2	31.0	23.5	25.5	17.0	23.1	26.3
Pregnancy and breast-feeding transmissio	4.7	5.1	4.6	0.7	3.5	6.2	4.7	4.8	4.6	5.3	3.8	7.1	2.4	3.9	5.6
Daily contact with an infected person	4.0	2.2	4.2	4.0	3.4	4.4	4.1	3.6	4.3	4.8	3.3	4.3	3.6	4.3	3.6
Other mean (air, public bathrooms or swimming pools, insect bites, kisses...)	3.6	1.8	4.0	1.8	4.0	3.9	2.8	3.9	4.1	3.1	2.2	5.5	3.6	2.7	4.8
Do not know	20.2	37.5	18.0	36.2	24.6	14.1	21.7	17.5	20.9	18.4	19.5	16.5	26.3	21.0	19.1

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

means of acquiring this disease. Despite the fact that a majority of them know it can be transmitted through sexual contact (77%), a low proportion of women realise that it can also be acquired through blood transfusions, or by needles or syringes, or that it can be transmitted to children through pregnancy if the mother is infected (35%, 25% and 5% respectively). Significantly, one out of five women did not know how AIDS is acquired while others gave inaccurate answers. Again the findings show the greatest social vulnerability among indigenous women and those with no schooling, 37% of whom did not know how the disease was transmitted.

A last topic refers to cervico-uterine cancer and breast cancer, two of the main reproductive health problems in women, the former being the third leading cause of death among those aged 30 to 44 in Mexico. Although the risks of suffering from these diseases increase with age, its lethality can be reduced by timely detection and increasing awareness of their existence.

The data yielded by the survey show (Table 17) that almost half the women aged 25 and over living in marginalised rural areas have had tests to detect the existence of uterine problems (44% of all women aged 25 to 34 and 52% of those aged 35 to 49). However, sharp differences are found among non-indigenous and indigenous women and between women with higher and lower educational attainment (55% and 24% in the first case and 57% and 29% in the second one). A striking fact, which is possibly symptomatic of the scant contact that women without children have with health institutions, or the erroneous belief that not having children implies they are exempt from the risk of cervico-uterine cancer, is the low proportion of women without children that have ever had a pap smear (18%). Moreover, the situation is even worse if one analyses the figures for women who have had these tests done over the past two years: only 16% of nulliparae aged 25 or over, 21% of indigenous women and 26% of those with no schooling, as opposed to 47-49% of non-indigenous women, those with 3-4 children or those who have completed elementary school.

A similar profile is obtained for breast cancer. Over half the women aged 25 and over received information on how to examine their breasts and had performed these examinations (57% and 56%). Table 17 reflects the differences between women with different ethnic and schooling backgrounds. The main reason women gave for not examining their breasts is the lack of pain or discomfort they experience,

Table 17. — Proportion of women 25 years and over that have had pap smear and have performed breast exploration

	Total	Ethnicity		Education			Age		Parity				Contracept.	
		Indigenous	Non-indigenous	None	Partial elementary	Complete elem. or +	25-34	35-49	zero	1-2 children	3-4 children	5 children or +	Non-users	Users
% have had pap smear	48.0	23.7	55.1	29.4	50.5	57.3	44.4	52.2	17.5	49.6	55.0	48.1	31.2	62.7
Time since the last pap smear	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Never done	52.0	76.3	44.9	70.6	49.5	42.7	55.6	47.8	82.5	50.4	45.0	51.9	69.0	37.6
Last year	35.0	18.6	39.9	23.3	35.8	41.8	32.6	37.9	13.7	34.3	38.7	36.9	21.1	46.7
2 years	6.0	2.0	7.2	2.7	6.5	7.5	6.3	5.8	2.0	6.1	8.9	4.5	4.8	7.0
3-4 years	3.8	1.3	4.4	1.5	4.1	4.8	3.7	3.8	0.8	7.0	4.4	2.3	2.9	4.5
5-9 years	2.0	1.8	2.1	0.6	2.6	2.3	1.6	2.5	1.0	2.2	1.9	2.3	1.7	2.4
10 years and more	1.2	0.0	1.5	1.2	1.5	0.8	0.1	2.2	0.0	0.0	1.1	2.0	0.5	1.8
% have received information on how to examine breasts	56.7	40.9	61.1	41.5	58.4	64.1	55.1	58.4	44.5	57.9	59.1	56.5	47.5	64.5
% periodically self-examine their breasts	55.7	35.5	61.2	36.3	58.1	64.8	54.3	57.1	42.1	57.1	60.0	54.1	44.8	64.9
Reasons for not examining breasts	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Absence of pain or discomfort	55.7	46.4	60.5	51.2	55.1	62.5	56.4	55.4	55.1	59.9	54.5	55.5	51.9	61.2
Do not feel it is important	13.3	9.9	14.9	13.2	14.9	11.5	12.0	14.8	16.2	9.0	16.2	12.6	2.6	2.3
Ignorance on how to do it	11.9	13.2	11.4	10.2	14.6	10.0	12.0	11.7	8.8	15.6	14.1	9.5	12.0	11.8
Other	2.5	3.1	2.1	2.0	1.7	3.8	2.4	2.4	1.4	2.7	1.3	3.3	10.6	17.3
Do not know	16.5	27.4	11.1	23.3	13.7	12.1	17.1	15.8	18.5	12.9	13.9	19.2	22.9	7.4

Source: Reproductive Health Survey, IMSS-Solidaridad-CONAPO, México, 1999.

a reason stated by just over half of those who do not do so and, quite surprisingly, this answer was given mainly by the most highly educated, non-indigenous women and current contraceptive users. The second most frequent reason is "*they don't know*" (16%), but the way this question was phrased in the questionnaire fails to show whether the interviewee does not know how to carry out the examination or whether she does not know why she failed to do it. Finally, other reasons stated by the women are the lack of importance they confer to the exams and their ignorance about tumours and how to examine their breasts (13% and 12%).

Despite the limitations of the survey data, these findings offer relevant insights related to some of the critical issues mentioned in the first section of this text. The narrow, partial view of FPP and maternal and child programs, which until very recently focussed mainly on contraceptive use and the reproductive events most closely linked to procreation, have overshadowed other reproductive health problems, where women still have many unmet needs that are not being taken into account and therefore not satisfied.

4. Final considerations

In previous sections we have presented an exploratory yet incomplete overview of theoretical and methodological problems related to the meaning and scope of the concept of unmet needs, as well as some empirical evidence surrounding the current status of RH and unmet needs in a marginal rural context of Mexico. From the overwhelming description of facts and figures assessed, we have pointed out some of the main uncertainties, ambiguities, and gaps that have yet to be dealt with in order to respond to many of the unanswered questions posed.

Our main purpose in this article has been to illustrate some of the crucial unresolved facts related to women's unmet needs in certain aspects linked to their reproductive health, based on survey data for a rural marginalised context. The research strategy followed has allowed us to explore some of the main aspects related to the narrow and misleading theoretical, methodological and analytical frameworks commonly used to define, identify and construct the concepts, dimensions, variables and questions posed in most surveys on RH issues. Unlike classical demographic analysis, which searches for large-scale behav-

iours, we have focussed on the small but significant relative numbers that are usually disregarded. Highlighting some of the risk situations for the most socially vulnerable women has produced a more comprehensive overview of their RH and unmet needs. This analytical strategy has also yielded ways of facing and reducing public and individual barriers to the satisfaction of women's needs in this field and bridging the gap between societal, institutional and individual needs. Nevertheless, our data fails to deepen our knowledge of these needs, and the facts analysed in this paper should be viewed as elements for preventing misleading actions from being undertaken by health policies and programs, which should be redefined according to the specific circumstances of the various and heterogeneous populations.

The main results include the enormous variations in UNFC levels, depending on the criteria used to estimate them. Also, regardless of the criteria used, we have shown the persistence of sharp inequalities between different population groups, where indigenous women, those with no schooling and, in most cases, older women, tend to have the highest unmet needs.

Secondly, as regards women's reproductive goals, although the number of children women have had and wished to have is almost the same, there is a non-negligible proportion of women who are dissatisfied because of having had either more or fewer children than they wished for. This last issue is significant for women who cannot have children due to infertility causes or sterilization and it is also a problematic aspect that has largely been overlooked. The high incidence of sterilization, particularly among young women, should be seen as part of women's unmet reproductive needs and the conditions that prevent them from reproducing and limit their ability to decide whether, when and how often to do so. In addition to the above, the prevalence of high infant, child and youth mortality, abortion and Caesarean sections are still significant reproductive health problems that prevail in marginal rural contexts and are becoming exacerbated among the most vulnerable groups.

Thirdly, despite the massive implementation of FPP in the various social contexts and population groups, sharp differences remain regarding contraceptive practice, where the proportion of contraceptive users among indigenous women and those without schooling is much lower than among non-indigenous women and those that have complete elementary school. However, when analysing the method used we

found that female sterilization is the most common contraceptive method, used almost equally by both ethnic groups although far less so among women with greater educational attainment. It is worth noting the existence of this practice, albeit in a small proportion, even among young women and those with low parity.

Moreover, the evidence on women's circumstances and their choice of contraceptive methods has revealed certain critical, questionable and adverse situations in health institutional practices, illustrating women's lack of freedom and options regarding the method to be chosen. These include influence and in some cases imposition of service providers of a contraceptive method, mainly sterilization and IUDs, regardless of age and parity and even without women's consent; women's vulnerability when they are sterilized immediately after childbirth or a Caesarean section; the narrow range of safe, reversible methods available at the health clinics; the lack of and/or limited information given by doctors on the characteristics and side effects of the method adopted or regarding other existing methods. These facts reflect the contradictions between the norms established by health institutions and the rationale imposed by the FPP, which are being exacerbated in marginal and poor areas and within them in the case of indigenous women and those with no education or incomplete schooling**.**

Fourthly, the overview we have given of health services that women have received during pregnancy and childbirth is still extremely unpromising and inequitable. Although nowadays prenatal care seems to be a more universal practice, the minimum medical standards established by the government (number, timing and frequency of prenatal checkups), are not being fully met, again mainly among indigenous women, those without schooling and higher parity and older women. Regarding childbirth attendance, suffice it to say that just over half of women's deliveries of their last live-born children between 1994-1999 were attended by a doctor. The lack of medical care in this case is particularly acute among women without schooling and indigenous women, where no more than a quarter of them were attended by doctors, since the majority of these women had their deliveries attended by a midwife, and a small proportion gave birth on their own.

There is a striking lack of consistency between women receiving prenatal care from medical institutions and having their babies delivered by midwives, either because they prefer it or because it is the only available alternative. This fact is related to the place where delivery

takes place, since almost half of all deliveries were carried out in private homes (whether the woman's, the midwife's or a relative's) as was the case for over 70% of indigenous women and those with no schooling. The lack of medical personnel, means of transport and financial resources at the time of delivery, the distance to the clinic, the distrust and lack of confidence in the services offered by public institutions, the excessive practice of Caesarean sections and sterilization are not only the main reasons for not seeking medical service during childbirth, but also evidence of the obstacles that have prevented a significant proportion of women from gaining access to health services.

Finally, in relation to other reproductive health problems, such as the knowledge, awareness, prevention, detection and treatment of STDs, cervico-uterine and breast cancer and HIV/AIDS, the picture is even more distressing. The findings indicate, on the one hand, the critical situation of women living in marginalised rural areas, where the greatest disparities in ethnic status, educational level and generations exist. On the other hand, there is ample evidence of the insufficient role played by health care services, which, due to the narrow and partial view of health and FP programs that has prevailed until very recently, has hampered the care of these reproductive health problems. A similar situation exists in the research field, where there is a need to analyse these problems using a variety of methodological tools within a broader conceptual frame.

The results of the data analysed highlight and confirm the precarious conditions and unsatisfied needs as well as the enormous disparities and inequalities between the various population groups regarding their reproductive health. Although these findings are hardly surprising since these women comprise population groups living in extremely poor, marginal and less developed rural contexts, it is worth noting the existence, within these contexts, of groups that are even more excluded and marginalised than others from the benefits of social and public policies, particularly from population and health interventions. This is the case of women who live in social, cultural and institutional contexts where they have had fewer opportunities of access to education, and have experienced the greatest gender and power inequity relations. These women live in contexts of weak FPP where programs are implemented with a political and medical rationale, without taking into account the specific economic, social and cultural conditions and needs of the various population groups.

Despite the massive expansion of health services, the success and achievements of FPP, their reorientation according to the RH paradigm and the interventions focussed on the most marginal areas in Mexico, many unequal RH conditions prevail. Also, although some RH components that were absent from FPP have recently received more attention from service providers, their interventions are still insufficient and in some cases critical, making them one of the most urgent challenges to be addressed by health institutions. These include the prevention and attendance of abortions, STDs, cervical and breast cancer, and symptoms related to menopause and climaterium, which will be exacerbated due to the ageing population and the growing number of adolescents and youth.

Other related problems on the institutional side are linked to the persistence of the hegemonic medical/institutional rationale that continues to overlook the cultural dimensions that influence RH behaviour, impose contraceptive methods that impede or restrict the performance of individuals' free and informed choice, and maintain the high frequency of Caesarean sections and sterilization practices. This not only jeopardises women's rights and health, but also contributes to the population's fears, distrust and lack of motivations to seek quality health services.

Likewise, although the gender perspective, adolescent and men's reproductive health problems have been included at the theoretical and rhetorical level, their adequate incorporation into medical services and practices is largely absent. This therefore constitutes a key aspect in responding to the specific needs and demands of women, men, adolescents and other specific population groups.

The reflections as well as the facts and figures described in this text are extremely thought-provoking in that they highlight needs and uncertainties in some critical RH aspects, pose challenges and suggest paths to follow. They point out the limitations derived from simplistic and conventional conceptual schemes and methodological approaches, as well as analytical strategies that are unable to deal with such a complex, dynamic, multidimensional problem. The potential of the reproductive health approach for achieving a better understanding and above all for policy purposes, in order to respond to "RH needs of individuals and of society as a whole" is still an urgent task that must be undertaken in the near future.

In the academic realm, research is required that will combine quantitative and qualitative methodologies to achieve a better understanding of the processes and social relations that influence sexual and reproductive behaviour. This implies the development of conceptual frameworks to be incorporated into the diverse methodologies and instruments for gathering information, which should include the following aspects: a) the specific economic, social, political, cultural and institutional circumstances in which human lives are "situated" and in which they elapsed, circumstances that largely influence and determine the options, limits and diverse responses to individuals' actions; b) the spheres and social actors of influence that intervene in the reproductive and sexual life of the population (such as the family, health, education, legislative and religious institutions, NGOs, etc.); and c) the clear identification and definition of the main analytical categories and dimensions that influence the RH processes (social and gender inequalities, power relations, decision-making processes, etc.). In particular, in the design of surveys, better-designed questions, categories of responses and indicators are required for the accurate recording of the needs, preferences, intentions, experiences and practices defined by the individuals themselves, in order to avoid assuming and defining them a priori according to certain objectives and interests which reflect social, moral and political normative constructions. To this end, preference should be given to the voices of the different social actors that interact with each other. This priority strategy involves giving the necessary resources to academia to assume responsibility for data collection in order to prevent information gaps due to questions regarded as politically incorrect and misleading or focussing exclusively on certain themes, to suit particular political interests. The involvement of an interdisciplinary team and interaction with the authorities in charge of defining and implementing public policies and specific programmes is also essential.

As for the link between reproductive health and poverty, we should begin by dealing with the latter in a broad, multidimensional way; in other words, not restricting the analysis to material needs, such as housing, education and health, which, although fundamental, are only part of the picture. Research efforts require the development of concepts and indicators to learn about institutional, cultural and social poverty conditions that generate and express basic needs and unmet needs related to the quality of life of individuals and society. Special

emphasis must be placed on new and contemporary forms of vulnerability and social exclusion associated with the reorganization and destructuring of the economy at the global and local level. Regarding reproductive health needs, the challenges mainly lie in incorporating and relating the neglected or marginalised set of sexual and reproductive issues, which are closely interrelated, by referring them to all the population groups and not only to those in their reproductive life cycle, including as well the various aspects related to access and quality of care.

The knowledge derived from these research lines will also be extremely useful in defining and implementing more comprehensive and high quality RH programs. Many FPP failed to fulfil expectations largely because they refused to listen to women users' complaints about the unpleasant symptoms or negative effects of contraceptive methods or medical practices or to pay attention to the barriers faced by women in their access to quality health services. The lack of safe, appropriate health services for dealing with the high rates of abortion and the high frequency of Caesarean sections and sterilization not only calls for further research, but also for a solid, scientific debate on the moral, social and political interests, motivations and forces that guide the medical and health institutional rationale, as well as the actions and strategies to be implemented to modify them. In this respect, another critical aspect related to the sphere of public interventions has been the implementation of homogenous, indiscriminate programs and actions without adapting them to specific economic, social, cultural and institutional situations and contexts and according to the specific needs of the various population groups.

It is in the political sphere of interventions and actions that tensions, uncertainties and critical situations are most keenly felt. These must be identified and carefully analysed if they are to reduce the poverty gap, respect sexual and reproductive rights, reduce social and gender inequalities, respond to individuals' needs and improve the population's reproductive health and living conditions. The reduction of the role of the State and its resources in social programs, especially those related to reproductive health, as a result of structural adjustment programs, the imposition of market forces and globalising health reforms and the growing influence of fundamentalist and conservative positions are serious threats that hinder the achievement of individuals' sexual and reproductive rights. Individuals' right to control their bodies, their self-determination and empowerment in crucial aspects of

their sexual and reproductive lives, should also be considered as circumstances not exempt from tension that increase the vulnerability of large groups of the population.

From our point of view, sociodemographic research and the analytical instruments of demography can help identify the population groups subjected to exclusion, segregation, vulnerability and risky behaviours. Its results can also describe the conditions of precariousness and the mechanisms of discrimination and coercion by various social institutions and their agents in relation to interventions in the field of reproductive health. Above all, the incorporation of elements from the conceptual frameworks of other social sciences and maintaining a critical, responsible attitude are crucial not only for a better understanding of the population's RH needs. They are and should also be viewed as indispensable inputs to be included in the design and implementation of population and health policies.

References

APARICIO, Ricardo (2001), "Institutional and family determinants of unmet need for family planning services in Mexico", paper presented at the *Annual Meeting of the Population Association of America*, Washington, D.C.

BALÁN, Jorge (1999), "Concluding remarks: Differentials in policy-making and implementation", in: A. I. Mundigo, ed., *Reproductive Health: Programme and Policy Changes Post-Cairo,* Liège, IUSSP, p. 201-207.

BARZELATTO, José (1994), "Preface. Keynote address", paper presented at the XXIst Conference of the National Council for International Health, Virgina, Arlington (unpublished).

BARZELATTO, José (1998), "Desde el control de natalidad hacia la salud sexual y reproductiva: la evolución de un concepto a nivel internacional", in: E. Dóriac Bilac and M. I. Baltar da Rocha, eds., *Saúde Reprodutiva na America Latina e no Caribe. Temas e Problemas*, Sao Paulo, Prolap/ABEP/Nepo/Unicamp/Editora 34, p. 39-50.

BECK, Ulrich (1992), *Risk Society. Towards a New Modernity*, London, Sage Publications.

BERELSON, Bernard (1966), *Family Planning and Population Programs: A Review of World Development,* Chicago, University of Chicago Press.

BERQUO, Elza (1979), "Introducción", in: *Reproducción de la población y desarrollo 3*, Comisión de Población y Desarrollo, Consejo Latinoamericano de Ciencias Sociales, Sao Paulo, p. 7-22.

BERQUÓ, Elza (1999), "The ICPD Programme of Action and reproductive health policy development in Brazil", in: A. Mundigo, ed., *Reproductive Health: Programme and Policy Changes Post-Cairo*, Liège, IUSSP, p. 24-41.

BONGAARTS, John, and J. BRUCE (1995), "The causes of unmet need for contraception and the social content of services", *Studies in Family Planning*, vol. 26, no. 2, p. 57-75.

BOULIER, Bryan L. (1984), *Evaluating Unmet Need for Contraception: Estimates for Thirty-Six Developing Countries*, World Bank Staff Working Papers, Washington D.C., no. 678.

BOURDIEU, P. (1980), "A opiniao pública nao existe", in: M Thiollent, *Crítica metodológica, investigaçao social e enquete operária*, Sao Paulo, Editora Polis.

CAMARENA, Rosa María (1991), *Instituciones sociales y reproducción*, Mexico.

CAMARENA, R. M., P. CASTRO and G. SALAS (1994), "Las mujeres no unidas: una población dejada de lado en los estudios de anticoncepción y fecundidad", in: *Memorias de la IV Reunión Nacional de Investigación Demográfica en México,* Tome I, Mexico, INEGI-Sociedad Mexicana de Demografía, p. 141-151.

CARDENAS, Rosario (2000), "La práctica de la cesárea en las áreas rurales urbanas de México", in: C. Stern and C. J. Echarri, eds., S*alud reproductiva y sociedad. Resultados de investigación*, El Colegio de México, Mexico, p. 301-328.

CASTERLINE, John B., Aurora E. PEREZ and Ann E. BIDDLECOM (1996), "Factors underlying unmet need in the Philippines", *Studies in Family Planning,* vol. 28, no. 3, p. 173-191.

CERVANTES, Alejandro (1999), "Políticas de población, control de la fecundidad y derechos reproductivos: Una propuesta analítica", in: B. García, ed., *Mujer, género y población en México*, Mexico, El Colegio de México/Sociedad Mexicana de Demografía, p. 363-430.

CONAPO (1996), *Encuesta Nacional sobre las Instituciones en Planificación Familiar en México* (ENINPLAF), Mexico, Consejo Nacional de Población.

CONAPO (1999), *La situación demográfica de México*, Mexico, Consejo Nacional de Población.

CONAPO (2000a), *Cuadernos de Salud Reproductiva de la República Mexicana,* Mexico, Consejo Nacional de Población.

CONAPO (2000b), *La situación demográfica de México*, Mexico, Consejo Nacional de Población.

CONAPO (2001), *La población de México en el nuevo siglo,* Mexico, Consejo Nacional de Población.

CONAPO (2002), *La situación demográfica de México,* Mexico, Consejo Nacional de Población.

CONAPO/IMSS (1999), *Encuesta de Salud Reproductiva* (ESR), Mexico, Consejo Nacional de Población/Instituto Mexicano del Seguro Social.

CONNING, A. M., and J. DE JONG (1976), "La validez de las medidas sobre las preferencias respecto al tamaño de la familia en los contextos rurales de América Latina", in: *Reproducción de la población y desarrollo 3*, Comisión de Población y Desarrollo, Consejo Latinoamericano de Ciencias Sociales, Sao Paulo, p. 187-238.

COOK, Rebeca J. (1995), "Human rights and reproductive self-determination", *The American University Law Review*, vol. 44, no. 4, p. 975-1016.

CORREA, Sonia, and R. PETCHESKY (1994), "Reproductive and sexual rights. A feminist perspective", in: G. Sen, A. Germain and L. C. Chen, eds., *Population Policies Reconsidered: Health, Empowerment and Rights*, Harvard Center for Population and

Development Studies and International Women's Health Coalition, Boston-New York, p. 107-123.

COSTA, Ana Maria (2000), "On women's right to experience their sexuality free from illness", *Women's Health Collection/5: Women, Sexuality, Rights*, Latin American and Caribbean Women's Health Network.

DAS, N. O., and U. SHAH (2001), "Understanding women's reproductive health needs in urban slums in India: A rapid assessment", paper presented at the *XXIVth IUSSP General Population Conference,* Salvador, Brazil.

DEGRAFF, Deborah, and V. DE SILVA (1996), "A new perspective on the definition and measurement of unmet need for contraception", *International Family Planning Perspectives*, vol. 22, no. 4.

DIRECCIÓN GENERAL DE PLANIFICACIÓN FAMILIAR (1989), *Encuesta Nacional sobre Fecundidad y Salud 1987*, Secretaría de Salud, Mexico, Dirección General de Planificación Familiar/Institute for Resource Development.

DIXON-MUELLER, Ruth (1999), *Gender Inequalitities and Reproductive Health: Changing Priorities in an Era of Social Transformation and Globalisation*, IUSSP, Policy and Research Paper, no. 16.

DIXON-MUELLER, Ruth, and A. GERMAIN (1992), "Stalking the elusive 'unmet need' for family planning", *Studies in Family Planning*, vol. 23, no. 5, p. 330-335.

DIXON-MUELLER, Ruth, and A. GERMAIN (1993), *Four Essays on Birth Control Needs and Risks. Reproductive Tracts: Issues and Innovations in Reproductive Health*, International Women's Health Coalition, New York.

DUMBL, L. (1999), "Women's illiteracy, not a neo-Malthusian time bomb. A feminist view of the 1999 population summit", report by UNFPA.

EASTERLIN, Richard A. (1975), "An economic framework for fertility analysis", *Studies in Family Planning*, vol. 6, no. 3, p. 54-63.

FARÍA, Vilmar (1988), "Política de gobierno y regulación de la fecundidad", paper presented at the *46th Americanist International Congress* (unpublished).

FATHALLA, M. F. (1992), "Reproductive health in the world: Two decades of progress and the challenge ahead", in: J. Khannam, P. F. A. Vanhook and O. D. Griffing, eds., *Reproductive Health: A Key to a Brighter Future*, Geneva, WHO (special XXth anniversary issue).

FIGUEROA, Juan Guillermo (1999), "Fecundidad, anticoncepción y derechos reproductivos", in: B. García, ed., *Mujer, género y población en México*, Mexico, El Colegio de México/Sociedad Mexicana de Demografía, p. 61-102.

FORD FOUNDATION (1991), *Reproductive Health: A Strategy for the 1990's*, New York, Ford Foundation.

FORO NACIONAL DE MUJERES Y POLITICAS DE POBLACION (1999), *Retos y obstáculos de la salud sexual y reproductiva, pobreza y desarrollo en México*, Mexico, Foro Nacional de Mujeres y Políticas de Población.

GAUTIER, Arlette, and André QUESNEL (1993), *Politique de population, médiateurs institutionnels et fécondité au Yucatán (Mexique)*, Paris, ORTSOM.

GERMAIN, Adrienne (1993), "Are we speaking the same language? Women's health advocates and scientist talk about contraceptive technology", in: R. Dixon-Mueller and A. Germain, *Four Essays on Birth Control Needs and Risks. Reproductive*

Tracts: Issues and Innovations in Reproductive Health, International Women's Health Coalition, New York, p. 3-6.

GERMAIN, Adrienne, and Ruth DIXON-MUELLER (1993), "Whose life is it anyway? Assessing the relative risks of contraception and pregnancy", in: R. Dixon-Mueller and A. Germain, *Four Essays on Birth Control Needs and Risks. Reproductive Tracts: Issues and Innovations in Reproductive Health*, International Women's Health Coalition, New York, p. 7-10.

GORDON, L. (1977), *Woman's Body, Woman's Right: A Social History of Birth Control in America,* Vikings Penguin, New York.

JAIN, Anrudh (1999), "¿Debería seguir siendo una prioridad la eliminación de la necesidad insatisfecha de anticoncepción?", *Perspectivas Internacionales en Planificación Familiar*, special number, New York, p. 31-36.

JASIS, Mónica (2000), "A palabras de usuaria… ¿oídos de doctor? Una exploración sobre las necesidades de salud reproductiva de las mujeres en La Paz, Baja California Sur", in: C. Stern and C. J. Echarri, eds., *Salud reproductiva y sociedad: Resultados de investigación*, Mexico, Centro de Estudios Demográficos y de Desarrollo Urbano, Programa de Salud Reproductiva y Sociedad, Centro de Estudios Sociológicos, Programa Interdisciplinario de Estudios de la Mujer, El Colegio de México, Mexico, p. 97-143.

KABEER, N. (1998), "Gender, demographic transition and the economics of family size: Population policy for a human-centred development", paper presented at the seminar on *Population, Poverty and Environment*, Rome (unpublished).

KOBLINSKY, Marjorie, and N. NACHBAR (1999), "The challenge of implementing integrated reproductive health interventions", in: A. Mundigo, ed., *Reproductive Health: Programme and Policy Changes Post-Cairo*, Liège, IUSSP, p. 90-109.

LERNER, Susana, and A. QUESNEL (1994), "Instituciones y reproducción. Hacia una interpretación del papel de las instituciones en la regulación de la fecundidad en México", in: F. Alba and G. Cabrera, eds., *La población en el desarrollo contemporáneo de México*, El Colegio de México, Mexico, p. 53-84.

LERNER, Susana, and A. QUESNEL (2002), "Contextos, instituciones y actores sociales: Hacia un enfoque múltiple de las relaciones entre condiciones de vida y comportamientos reproductivos", in: C. Rabell and M. E. Zavala de Cosío, eds., *La fecundidad en condiciones de pobreza: Una visión internacional*, Instituto de investigaciones sociales, UNAM, Mexico, p. 25-46.

LERNER, Susana, and I. SZASZ (2000), "Intervention and research on reproductive health and sexuality: Key issues drawn from specific experiences in Mexico", Seminar on *Sexuality and Social Change: An Agenda for Research and Action in the 21st. Century*, Associaçao Brasileira Interdisciplinaria de AIDS (ABIA), Río de Janeiro, Brazil.

LERNER, Susana, A. QUESNEL and M. YANES (1994), "La pluralidad de trayectorias reproductivas y las transacciones institucionales", *Estudios Demográficos y Urbanos*, vol. 9, no. 3, p. 543-578.

MUNDIGO, Axel I. (1999), "Reproductive health: The challenges of a new field", in: A. Mundigo, ed., *Reproductive Health: Programme and Policy Changes Post-Cairo*, Liège, IUSSP, p. 5-23.

PATARRA, Neide, and M. C. F. A. DE OLIVEIRA (1974), "Anotaciones críticas sobre los estudios de fecundidad", *Reproducción de la población y desarrollo I,* Consejo Latinoamericano de Ciencias Sociales, p. 91-106.

PETCHESKY, Rose (1995), "From population control to reproductive rights: Feminist fault lines", *Reproductive Health Matters,* vol. 6, p. 152-161.

RAMA RAO, S., and A. JAIN (2001), "Quality of services: Issues of measurement", paper presented at the *XXIVth IUSSP General Population Conference,* Salvador, Brazil.

ROBEY, Bryant, J. ROSS and I. BHUSHAN (1996), "Meeting unmet need: New strategies", *Population Reports,* Series J, no. 43, Baltimore, Johns Hopkins University.

SAI, F. T., and J. NASSIM (1989), "The need for a reproductive health approach", *International Journal of Gynecology and Obstetrics,* vol. 3, p. 103-113.

SALLES, Vania, and Rodolfo TUIRÁN (1995), "Dentro del laberinto: Primeros pasos para la elaboración de una propuesta teórico-analítica para el Programa de Salud Reproductiva y Sociedad de El Colegio de México", *Reflexiones, Sexualidad. Salud Reproductiva y Reproducción,* Programa de Salud Reproductiva y Sociedad, El Colegio de México.

SATIA, Jay (1999), "Managing quality reproductive health programs: Issues and challenges", in: A. Mundigo, ed., *Reproductive Health: Programme and Policy Changes Post-Cairo*, Liège, IUSSP, p. 61-89.

SEN, Gita, A. GERMAIN and L. C. CHEN, eds. (1994), *Population Policies Reconsidered: Health, Empowerment and Rights,* Harvard Center for Population and Development Studies and International Women's Health Coalition, Boston-New York.

SINDING, Steven (1993), "Getting to replacement: Bridging the gap between individual rights and demographic goals?, *Demography India*, vol. 22, no. 1, p. 1-10.

SINDING, Steven W., A. ROSS and A. G. ROSENFELD (1994), "Seeking common ground: Unmet need and demographic goals", *International Family Planning Perspectives*, vol. 20, no. 1, p. 23-32.

SZASZ, Ivonne, and S. LERNER (2002), "El enfoque de salud reproductiva en el marco del debate sobre población y desarrollo. Aportes de la investigación sociodemográfica", in: B. García Guzmán, ed., *Población y sociedad al inicio del siglo XXI*, El Colegio de México, Mexico, p. 157-180.

TERBORGH, A., A. ROSEN, J. E. SANTISO, R. TERCEROS, W. BERTRAND J. and S. BULL (1995), "Family planning among indigenous population in Latin America", *International Family Planning Perspectives*, vol. 21, no. 2.

THOMAS, J. W., and M. S. GRINDLE (1994), "Political leadership and policy characteristics in population policy reform", in: J. L. Finkle and C. A. McIntosh, eds., *The New Politics of Population. Conflict and Consensus in Family Planning. Population and Development Review*, suppl. to vol. 20, p. 51-72.

TUIRAN, Rodolfo (1988), "Sociedad disciplinaria, resistencia y anticoncepción", in: *Memoria de la Reunión sobre avances y perspectivas de la investigación social en planificación familiar en México*, Mexico, Secretaria de Salud, p. 45-58.

UNITED NATIONS (1994), *Programme of Action of the United Nations International Conference on Population and Development*, New York, United Nations.

VISARIA, Leela (1997), "Unmet need for family planning in Gujarat: A qualitative exploration", *Economic and Political Weekly*, vol. 32, no. 17, p. 29-36.

WELTI, Carlos (1998), "De la reproducción social a la salud reproductiva", in: E Doria Bilac and M. I. Baltar da Rocha, eds., *Saúde Reprodutiva na America Latina e no Caribe. Temas e Problemas*, Sao Paulo, Prolap/ABEP/Nepo/Unicamp/Editora 34, p. 51-66.

WESTOFF, Charles (1988), "The potential demand for family planning: A new measure of unmet need and estimates for Latina American countries", *International Family Planning Perspectives,* vol. 14, no. 2, p. 45-53.

WESTOFF, Charles F., and A. BANKOLE (1995), *Unmet Need: 1990-1994*, Calverton, Maryland, Macro International DHS Comparative Studies, no. 16.

WESTOFF, Charles F., and A. BANKOLE (1996), "The potential demographic significance of unmet need", *International Family Planning Perspectives*, vol. 22, no. 1, p. 16-20.

WESTOFF, Charles F., A. BANKOLE and Anne PEBLEY (1981), "Alternative measures of unmet need for family planning in developing countries", *International Family Planning Perspectives*, vol. 7, no. 4, p. 126-136.

YINGER, Nancy V. (1998), *Unmet Need for Family Planning. Reflecting Women's Perceptions*, International Center for Research on Women, Washington.

ZURAYK, Huda (1999), "Reproductive health and population policy: A review and a look ahead", in: A. Mundigo, ed., *Reproductive Health: Programme and Policy Changes Post-Cairo*, Liège, IUSSP, p. 42-60.

4

UNMET NEED FOR CONTRACEPTION AMONG MARRIED MEN IN URBAN NIGERIA

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1. Introduction

Renewed emphasis on the issue of poverty has been rekindled by the unacceptability of its continued prevalence, particularly in Africa. Poverty was the theme of the 1995 World Summit for Social Development in Copenhagen, the 1997 United Nations Human Development Report, and the World Development Report in 2000. This focus on poverty is not misplaced, given its retarding influence on development efforts. That a large and increasing proportion of the population in Nigeria is reported to be poor is not surprising, particularly when viewed against the background of an ailing economy for almost two decades. Nigeria was ranked 40th among the world's poorest countries in 1999 and the share of the country's population below the poverty line is reported to have increased from 42.8% in 1992 to 65.6% in 1996 (World Bank, 1999, 2001). The Federal Office of Statistics (FOS, 1999), using a series of consumer expenditure surveys over a period of sixteen years, from 1980 to 1996, also

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confirms the increasing incidence of poverty in the country. The poverty level in 1980 was 27.2%, it rose to 46.3% in 1985 and declined to 42.7% in 1992 and, by 1996, it reached an all time high of 65.6%. In absolute terms, the population affected was 17.7, 34.7, 39.7 and 67.1 million for 1980, 1985, 1992 and 1996, respectively. Demographic indicators such as infant and child mortality, maternal mortality and life expectancy over the years have not shown considerable improvement, particularly when compared with other developing countries within the subregion or other continents. For example, the life expectancy of 53.2 years estimated for the country using the 1991 census is low when compared with 64 years for Indonesia in 1994. Stunting, a measure of the long-term effect of undernutrition, is reported to have seemingly increased between 1990 and 1999 by 10 percentage points, from 36% to 46% (NPC, 2000). The incidence of poverty in the country is increasing, despite the various programmes put in place to ameliorate the situation.

The poverty profile as presented by FOS (1999) also indicates that the incidence is higher in the rural than in the urban areas. In 1996, 58% of the urban population, as against 70% of the rural population, are poor. An inverse relationship is observed between poverty and education. Households headed by persons with no education had the highest poverty incidence, whereas those with an educational level above the secondary level had the lowest chance of being poor. The incidence of poverty, on the other hand, is positively related to family size. While most small households were out of poverty, most large households were poor. Households with less than five members had a poverty incidence lower than the national average, while households with five or more members had a higher poverty incidence. In 1996, a little more than half of households with 2 to 4 members were categorized as poor, while three quarters of the households having between 5 to 9 members were poor.

In recognition of the adverse effect of a high population growth rate on national development and individual welfare, the government launched the first *National Policy on Population for Development, Unity, Progress and Self-Reliance,* which is currently being reviewed (FRN, 1988). Prior to this period, a contrary perception of the influence of the country's population growth rate on development efforts prevailed. Among other objectives, the policy sought to improve the living standard and the quality of life of the people and achieve lower growth rates through reduction in birth rates by voluntary fertility regulation methods. This position by the government resulted in an increased participation in the provision of fam-

ily planning services. Hitherto, the initial provision of family planning services in the country was by private organizations and dates back to the early 1960s as a result of concern over the increasing incidence of illegal abortion. At present, the provision of family planning services is mainly through private and public health facilities, even though methods such as the condom and pills may be obtained from patent medicine stores and pharmacies. Although the costs of family planning commodities may be described as low, such costs can, however, be enormous for the poor.

The family planning situation in Nigeria over the years has undoubtedly experienced improvements, although it remains relatively poor when compared with other African countries. Knowledge of contraceptive methods among women rose from 34% in 1981/82 to 44% in 1990 and 64% in 1999. The level of use, however, failed to increase by the same magnitude, with current use of any method of contraception increasing from 6% in 1981/82 and 1990 to 15% in 1999 (FOS, 1992; NPC, 2000). The level of knowledge and use of contraception also vary significantly for regions of the country, urban/rural residence, and with the sociodemographic background of individuals. Data from the 1990 and 1999 *Nigeria Demographic and Health Surveys* (DHS) (FOS, 1992; NPC, 2000) confirm a higher level of knowledge of contraceptive methods among currently married women in the south compared to the north. In 1990, the highest percentage of knowledge of any contraceptive method was 74% in the southwest, compared with 30% in the northwest. Similarly in 1999, although there was a general improvement across the regions regarding knowledge of any method of contraception, the southwest, with 87%, has slightly more than twice the percentage of the northwest. The data for currently married men in 1999 is similar to that of women, except that the percentage among men reporting knowledge of contraceptive methods is higher – 90% of the men in the southwest compared with 65% in the northwest report knowledge of any method of contraceptive. Knowledge of contraception increases with higher education and it is almost 100% among those with higher education for both men and women, with primary education making a great difference among women compared to men using the 1999 data. By residence, knowledge of any method is higher in the urban population than in the rural. In 1990 and 1999, 70% and 83%, respectively, report knowledge of any method among married women compared with 36% in 1990 and 57% in 1999 for women in rural areas. In 1999, 93% of the men in urban areas and 79.5% in rural areas report knowledge of any contraceptive method.

Current use of any method of contraception also displays the same pattern as described for knowledge, both by region and education. The southwest has the highest contraceptive prevalence with 24%, while the north has 3%. Women with no education have 6% and men 12% compared with 45% for women and 53% for men with higher education. By residence, 23% of the women in urban locations compared with 12% in rural locations report current use of contraception, an 11 percentage point difference. For men, the figure is 39% in the urban area compared with 30% in the rural area (NPC, 2000).

The high and stable total fertility rate at six children per woman, with little variation (not more than one child) across regions, is attributable to the value attached to children, buttressed by the traditional customs and dominant religious beliefs of Christianity and Islam. Tradition-wise, barrenness or the inability to replace oneself is scorned. Women or men with one or two children are considered only a step better than the barren, equally demanding some amount of pity, while, conversely, women with large family sizes are honoured with special ceremonies in some cultures. Against this backdrop, it is not surprising to see a high number of people proffer nonnumeric responses ("as God gives") to questions on the desired number of children or ideal number of children.

Although the value attached to children cannot be alleged to have weakened, it may be argued that the economic distress facing the nation has somewhat influenced childbearing desires, observed to have declined from the standpoint of nonnumeric responses for the ideal number of children from approximately 61% in 1990 to 18% in 1999. The proportion reporting a desire to limit childbearing also increased between the two surveys from 15.4% in 1990 to 19.6% in 1999 for currently married women; and the figure for men is 18.8% in 1999. More urban compared to rural residents, and those in the south generally compared with those in the north, report a desire to stop childbearing in both surveys. Desire to stop childbearing also increases steadily with the increasing number of surviving children (FOS, 1992; NPC, 2000).

In the 1998 population policy, the desire was to achieve a reduction in the total number of children born to a woman to four children, and although the policy is currently under review, it is certain that a policy change is not expected in the opposite direction. One of the major critiques of the 1998 population policy is the restriction of the number of children to women and the difficulty in its implementation in the face of the critical role men play in childbearing issues. The importance of the

male attitude in the determining of sexual and social behaviours among women in patriarchal societies and the need to involve men in family planning programming is established in literature (Ezeh, 1993; Finger, 1992; Isiugo-Abanihe, 2003). In a study of five urban areas in Nigeria by Isiugo-Abanihe (2003), more men compared to their female counterparts agree to the prominence of men in various aspects of reproductive decision-making such as family size determination, when to have sex, duration of abstinence, and practice of family planning. For each of the issues raised, more than two fifths but less than half of the women indicated the prominent role of men, while the proportion for men is more than half in all the instances, except for the practice of family planning, with 48%. Increasingly, couple's joint decision-making on reproductive issues is becoming more common, especially with education. In instances where the female partner participates in childbearing decision-making, the male position is stronger, particularly where there is a disagreement (Isiugo-Abanihe, 2003). The 1999 NDHS reports disapproval of contraception by the spouse as a reason for non-adoption, particularly for women (7%) compared to men (2%) (NPC, 2000).

The importance of spacing births or limiting births for the health of women is of equal importance in a traditional society like Nigeria, where the traditional customs of breastfeeding for a long period and abstinence from sex for long periods, which ensured long birth intervals, have undergone changes. It may, however, be easier to effectively achieve the purpose of limiting childbearing with effective contraception compared to child spacing. This is because of the fear associated with effective contraceptive methods and future fertility desires. This fear may no doubt account for the high unmet need reported for the country. Among currently married women, unmet need estimates were 21% in 1990 and 18% in 1999 (FOS, 1992; NPC, 2000). The importance of the concept of unmet need, which evolved from the "kap-gap" term, is anchored in its ability to influence the development of family planning programmes to better reach groups that are yet to be reached and better serve those currently being served. The measurement of the term has undergone changes over time, both in terms of the population to which it is applicable and in its definition. While the term was first applied to women because of the orientation of most policies and family planning programmes in many developing countries that had married women as the main target for fertility control, the case for men and couples has increasingly been made (Ngom, 1997; Bankole and Ezeh, 1999). The argument for the inclusion

of various groups of persons – male, female, married, unmarried – in the measurement of unmet need is often justified, particularly given observed differences by sex for information on family planning methods since the inclusion of males. Another issue that arises is the need for definition and measurement to be applicable in a similar manner in order to enhance comparison of estimates across groups and to enable the use of one summary statistic for unmet need for an entire country. In this study, married men who report a desire for no more children, when either he or his spouse is not currently using any method of contraception at the time of the survey, are regarded as having unmet need for childbearing.

2. Methodology

The data used in this study come from a 1998 survey of urban households in Nigeria. The cities and towns covered are the ones for which Field Research Stations (FRSs) already existed since 1990 for the purpose of collecting systematic and longitudinal socioeconomic data. The FRSs were created using the longitudinal and latitudinal grid system that divided the country into seven cells consisting of urban and rural FRSs (for more detail on the FRSs, see Odumosu *et al.,* 1998). Only the seven urban sites were covered in this study. A total of 150 heads of households were interviewed in five urban centres in each of the seven cells, making a total of 5,250 households. In the selection of the households, each urban settlement was stratified into broad groups of upper, middle and lower classes on the basis of residential patterns. In each of the stratified clusters, systematic selection of households took place.

The urban bias of this study is relevant to the extent that these areas are better served with health facilities, both public and private, that provide family planning services. The people are also better exposed to information and more likely to limit childbearing. In the analysis of the data for this paper, the FRs were regrouped to reflect the four health zones into which Nigeria is divided for the effective implementation of Primary Health Care (PHC). Family planning services as provided by the government are embedded within the PHC. The distribution of health facilities in the country varies significantly within the health zones, the southwest being the most served (Kiragu *et al.*, 1995). While the population is dense in the south, it is sparsely distributed in the north, with the implication for more travel time to health facilities in the north. Approximately equal

populations obtain in each of the health zones, which also reflect sociocultural groupings in the country. The southeast is Zone A, comprising Imo, Abia, Anambra, Cross River, Akwa-Ibom Benue, Bayelsa, Ebonyi, Rivers and Enugu States; the southwest is Zone B, comprising Oyo, Lagos, Delta, Edo, Ekiti, Osun, Ogun and Ondo States; the northwest is Zone C, comprising Sokoto, Abuja, Kebbi, Kogi, Kwara, Niger, Zamfara, Kaduna and Katsina States; while the northeast is Zone D, comprising Kano, Gombe, Plateau, Borno, Taraba, Nasarawa, Yobe, Jigawa, Adamawa and Bauchi States.

Structured questionnaires were used to elicit information from the heads of households and details relating to other members of their household. The questions to which answers were sought relate to the socioeconomic background of all members of the households, the respondent's marital history, family size preferences, knowledge of, attitude toward, and practice of family planning, perception of the government's policy of four children per woman and perception of the respondent's quality of life. Due to the fact that men are often the head of households, except where the woman is divorced or widowed, the majority of the respondents were male. For this study, the few women who were interviewed are not part of the analysis. The types of questions asked also limit the possibility of addressing the concept of unmet need for spacing, despite its importance. The responses to three questions, "Would you like to have a (another) child or would you prefer not to have any more children?", "Are you currently using a method to delay or avoid having a child?", and "Is your spouse currently using a method to delay or avoid having a child?", are used to categorize the respondents as either having unmet need for family planning or not having unmet need. These questions were asked without any specific reference to a wife or partner of the respondent for those in polygynous union. For the questions on current use of contraception, only negative responses to both questions (for spouse and self) classify the respondent as not currently using contraception. The question on desire for more children was followed by a question on the number of children desired, and reason for desiring more children. Respondents who did not want more children were also asked why they preferred not to have any more children. For the question on current use of contraception, the reason for non-use was obtained. A total of 1,872 of all men interviewed irrespective of their marital status were identified as not desiring any more children (37.1% of 5,046).

In the first part of the analysis, the background of the respondents (currently married men) is discussed using simple descriptive data. In the second part of the analysis, the level of unmet need is examined by background characteristics, and logistic regression is used to assess the strength of the various variables on unmet need of men for limiting childbearing. Eight variables, which include mainly background variables and health service for family planning commodities, are included in the regression equation. Variables such as education, age, surviving children, religion and zone were chosen because of the prior knowledge of the relationship of these variables with contraceptive use. The variable 'birth within the last 12 months' is controlled due to the non-inclusion of variables that relate to the wives. Distance of place of residence to family planning service points was included, based on the established relationship of use of health facilities and distance to place of residence. Visitation to family planning service points with spouse, either voluntarily or through invitation by service providers, to some extent measures the exposure of men to a reliable source of information.

3. Results

3.1. Characteristics of respondents

The background characteristics of all the respondents as presented in Table 1 show that the majority of the respondents who are currently married were in monogamous union (83%). A mean age of 43.5 years obtains and the majority of them have three children and above, with a mean number of surviving children of 4.0. Approximately 57% were Christians, 41% were Muslims and the balance of other religious belief. The majority of the respondents are educated, with approximately 13% having no formal education. Less than 10% report primary school education, about 22% have secondary education and about 46% have higher education, which includes university and other professional qualifications. The level of education observed among the respondents to some extent reflects the urban location of the study, although an oversampling among persons with higher education and misreporting of the educational status among the respondents may have taken place. About the same percentage of respondents are from the northwest (29.7%), northeast (27.1%) and southwest (28.5%) health zones, with the southeast zone accounting

Table 1
Characteristics of respondents (married men only)

Characteristics		Percent	N
Type of marriage	Monogamous	83.3	3,879
	Polygynous	16.7	777
Age	<35	19.1	890
	35-39	19.5	908
	40-44	18.1	842
	45-49	16.2	754
	50-54	10.8	503
	55-59	7.0	324
	60+	8.6	401
	No response	0.7	34
	Mean	*43.5*	4,656
Number of living children	0	2.4	113
	1	10.9	506
	2	16.9	789
	3	17.6	821
	4	16.2	755
	5	10.6	494
	≥6	21.7	1,009
	No response	3.6	169
	Mean	*4.0*	4,656
Religion	Christian	57.7	2,687
	Muslim	40.7	1,894
	Others	1.6	75
Education	No schooling	13.2	614
	Primary	8.6	401
	Secondary	22.0	1,026
	Higher	45.5	2,118
	No response	10.7	497
Health zone	Northwest	29.7	1,381
	Northeast	27.1	1,263
	Southwest	28.5	1,325
	Southeast	14.8	687
% who have visited FP clinic		37.3	1,738
Distance to FP clinic	Very far	22.1	1,028
	Just far	26.9	1,253
	Not far	38.4	1,790
	No response	12.6	585
Total		100.0	4,656

Source: Field survey, 1998.

for 14.8%. Approximately 37% of the respondents have visited a family planning clinic in the past and 38% describe the distance to a family planning clinic as not far, almost half of the respondents describe it as either very far or just far.

3.2. Bivariate analysis

3.2.1. Desire for more children

The distribution of respondents indicating a desire for more children by background characteristics as presented in Table 2 shows that approximately 54.5% of all married men desire more children. Men in polygynous union are more likely to want more children compared with their counterparts in monogamous union; this may be related to the need for the youngest wife to have a number comparable to her co-wives. The percentage indicating a desire for more children is also observed to decline with increasing age, except at age 60 and above that experiences a slight increase, which may be attributed to the introduction of new wives into the household. The rate of the observed decline is, however, not sharp and may be attributed to the value attached to children. At age 50 to 54, almost two fifths of the men desire more children, while at age 55 to 59, about a quarter desire more children. By the number of surviving children, a negative relationship obtains, but as in age, the desire for more children remains high at four children and above. Muslims (72.8%) are more likely to desire more children compared to Christians (46.3%), probably because they are also more likely to be in polygynous union. The percentage of men that indicates a desire for more children is high across all educational categories, but men with no education are the most likely to desire more children. More than half of the men with primary education and above express a desire for more children. Men in the north compared with those in the south are also more likely to express a desire for more children.

3.2.2. Knowledge and use of contraception

The discussion on knowledge and use of contraception is based on the five major methods that are often used, based on reports obtained among the respondents: periodic abstinence, condom, withdrawal, pill and injection. Information was, however, collected for all the methods of

Table 2
Percentage of men desiring more children by background characteristics

Characteristics		Percent	N
Type of marriage	Monogamous	56.1	3,682
	Polygynous	64.1	738
Age	<35	87.5	815
	35-39	73.5	865
	40-44	59.0	809
	45-49	43.7	721
	50-54	39.0	490
	55-59	24.8	310
	60+	30.2	381
Number of living children	0	100.0	8
	1	94.6	500
	2	77.6	774
	3	60.5	806
	4	40.1	740
	5	37.2	486
	≥6	38.9	979
Religion	Christian	46.3	2,556
	Muslim	72.8	1,793
	Others	66.2	71
Education	No schooling	72.8	584
	Primary	53.7	391
	Secondary	59.5	985
	Higher	51.6	2,004
Health zone	Northwest	75.0	1,304
	Northeast	58.3	1,174
	Southwest	47.6	1,277
	Southeast	40.0	665
Total		54.5	4,656

Source: Field survey, 1998. — 'No response' cases are ignored.

contraception. Permanent methods – male and female sterilization – have less than 2% of the respondents reporting their use and other methods have a little more than 5% reporting their use.

As presented in Table 3, a high awareness of contraceptive methods obtains among the respondents, with almost all the respondents (about 93%) indicating knowledge of at least one contraceptive method. The condom had the highest percentage (81%) reporting knowledge of it,

Table 3
Knowledge of contraception (%) by background characteristics

Background characteristics	Any method	Pill	Injection	Condom	Withdrawal	Periodic abstin.	Number of men
Education							
No education	80.5	48.0	42.8	55.0	38.9	44.8	614
Primary	92.3	69.3	58.4	76.8	62.8	69.8	401
Secondary	95.9	78.0	66.4	85.7	68.3	75.4	1,026
Higher	96.2	87.7	78.0	89.2	76.6	80.5	2,118
Age							
<35	92.8	79.0	69.1	81.2	62.0	69.9	890
35-39	94.1	80.9	70.9	84.8	71.7	76.5	908
40-44	94.2	78.5	68.8	83.6	66.7	70.7	842
45-49	93.1	78.4	69.5	83.0	66.4	71.0	754
50-54	91.8	77.3	65.6	79.3	67.8	73.2	503
55-59	94.1	74.7	62.3	75.9	69.1	72.5	324
≥60	86.3	62.6	55.1	64.6	57.4	62.1	401
Health zone							
Northeast	90.7	75.3	61.1	77.9	58.9	64.4	1,263
Northwest	87.0	69.8	67.0	67.1	48.6	53.9	1,381
Southeast	97.5	80.2	73.5	88.4	86.2	67.3	687
Southwest	98.0	85.3	70.4	92.9	80.9	87.4	1,325
Religion							
Christian	97.5	85.3	73.6	89.9	78.5	84.2	2,687
Muslim	86.0	66.2	58.9	67.6	48.4	52.5	1,894
Others	90.7	68.0	56.0	69.3	69.3	80.0	75
No. of children							
2 or less	93.8	80.0	67.3	82.6	66.5	72.7	1,408
3-4	94.2	80.9	71.9	85.1	70.1	74.6	1,576
5-6	92.9	76.7	68.6	79.4	64.4	70.6	832
7+	89.1	65.3	56.9	68.7	57.5	61.8	671
Total	92.7	77.2	67.3	80.5	66.1	71.2	4,656

Source: Field survey, 1998. — 'No response' cases are ignored.

while withdrawal had the lowest percentage, with about 66%, among the five methods under consideration – the other methods are the pill, injection and periodic abstinence. These methods are among the most mentioned by the respondents.

By background characteristics, awareness of contraceptive methods is observed to increase with education for all specific methods, and the con-

dom is the most popular method for respondents in any specific educational status. Knowledge is also considerably high for all age groups and does not display a specific pattern. By health zone, knowledge of specific methods is equally high in all the zones, but the south had slightly higher percentages than the north. For all the methods under consideration, Christians are more likely to report knowledge compared to Muslims, even though the figures for the various methods by Muslims are relatively high. The percentage reporting knowledge of any method of contraception or of the specific methods increases to the fourth child and subsequently declines, although the figures remain high.

The report on ever-use of contraception by respondents includes that used by the spouse, and is shown in Table 4. Among all the men, over three fifths indicate the use of any method. Periodic abstinence (40.8%) is the most commonly ever-used method and is followed by the condom, with about 35.1%. Effective methods have the lowest percentage of men reporting their use – the injection has approximately 8% and the pill has 12.5%. These methods are female-specific and some underreporting for ever-use may arise from use by spouses outside marriage. The underreporting for the pill and injection is, however, not expected to be large and the data generally reflects the expected pattern. By background characteristics, report of ever-use of any method improves with increasing education and also for specific methods such as the pill, injection and condom. Ever-use of traditional methods such as withdrawal and periodic abstinence, however, displays very little variation by education. By age, ever-use of any method is high for all ages. For specific methods, the injection is the least likely to be reported for all the age groups, and those aged 60 years and above are the least likely to report ever-use of condom and pill. Ever-use of periodic abstinence is high across all ages and increases with age.

The level of ever-use for any method is higher in the southeast and southwest compared with the other health zones in the north, the northwest having the lowest percentage, with about 47%. The percentage reporting use of the pill and injection is generally lower in the north compared to the south, but this pattern does not obtain for the other methods. The percentage of men who have ever-used any contraception is higher among Christians compared to Muslims. For use of specific methods, such as the pill and injection, a higher percentage of Muslims compared to Christians report their use and the reverse obtains for the other methods – condom, periodic abstinence and withdrawal. Ever-use

Table 4
Ever-use of contraception (%) by background characteristics

Background characteristics	Any method	Pill	Injection	Condom	Withdrawal	Periodic abstin.	Number of men
Education							
No education	37.6	5.0	4.7	12.5	12.1	21.7	614
Primary	63.3	6.7	5.2	26.9	25.4	44.6	401
Secondary	68.8	9.8	5.3	38.5	26.7	48.4	1,026
Higher	70.8	16.7	10.7	43.8	25.3	44.4	2,118
Age							
<35	56.7	13.3	6.2	34.4	18.9	36.3	890
35-39	66.0	13.8	8.0	40.9	25.2	40.7	908
40-44	64.0	14.6	7.5	38.5	22.8	41.9	842
45-49	66.4	13.7	3.6	39.0	26.9	42.3	754
50-54	33.2	12.1	10.9	31.6	23.3	43.3	503
55-59	67.3	8.6	6.8	31.5	21.3	50.3	324
≥60	54.6	4.5	5.7	18.5	20.7	36.2	401
Health zone							
Northeast	59.3	17.3	9.7	34.6	20.7	33.6	1,263
Northwest	46.9	14.3	11.6	21.7	12.5	25.9	1,381
Southeast	75.4	4.9	3.1	41.6	35.4	54.1	687
Southwest	76.6	10.0	4.6	46.3	29.2	56.2	1,325
Religion							
Christian	75.3	13.6	7.6	45.1	29.8	52.5	2,687
Muslim	45.2	11.0	8.3	21.3	12.8	23.9	1,894
Others	33.3	9.3	5.3	26.7	29.3	48.0	75
No. of children							
2 or less	62.1	13.3	8.1	37.4	21.7	39.6	1,408
3-4	67.4	14.5	8.2	39.7	24.7	44.2	1,576
5-6	66.9	12.7	8.3	34.3	25.8	43.1	832
7+	53.4	6.6	6.0	23.2	19.4	35.0	671
Total	62.9	12.5	7.8	35.1	22.9	40.8	4,656

Source: Field survey, 1998. — 'No response' cases are ignored.

of contraception, both for any method and for the specific methods under consideration, in most instances is observed to increase with the increase in the number of children to the sixth child and to decline afterwards. The observed pattern may be attributed to the assumption of reduced fecundity of the wife with increasing age.

3.2.3. Current use of contraception among men desiring to limit childbearing

Among men who desire to limit childbearing (37%), approximately 51% report themselves as not using contraception, either modern or traditional methods (Table 5), and the percentage is expected to be lower if only modern methods are considered. The data therefore suggest a high level of unmet need for contraception for limiting childbearing among men in Nigeria. By background characteristics, the unmet need for contraception is observed to be high for all categories, but higher still for some compared with others. It declines with increasing education, connoting that the poor are likely to have a higher unmet need relative to the rich, given the relationship between education and poverty. Unmet need does not display a specific pattern by age, but the oldest age group has the highest percentage of unmet need, which may be due to the assumption of low risk of conception resulting from the advanced age of the spouse. Christians compared to Muslims have a lower unmet need level. By number of children surviving, unmet need declines with the increasing number of children, but increases at the sixth child and above. The pattern of unmet need observed for the number of surviving children may be interpreted as reflecting caution in the adoption of effective contraception among the respondents, and the increase in unmet need at the sixth child and above may be attributed to the perceived reduction in the risk of pregnancy of the spouse due to advance in age. Men in the southeast zone have the highest percentage of unmet need, with approximately 58%, followed by those in the northeast, with 51%, and those in the northwest and southwest have about the same percentage. Men who have ever visited FP service delivery points have a lower unmet need compared with their counterparts who have not. Also, men who describe the distance of residence to service delivery points as very far have the highest percentage of unmet need compared with those who describe the distance as just far or not far. Expectedly, men who had knowledge and had ever-used any method of contraceptive have a lower unmet need compared with those that have no knowledge and have never-used any contraceptive methods.

Table 5
Percentage distribution of men with unmet need for family planning among currently married men desiring to limit childbearing, by background characteristics

Background characteristics		% with unmet need	N
Education	No schooling	74.4	156
	Primary	54.8	177
	Secondary	48.9	393
	University	47.0	939
Age	<35	51.5	97
	35-39	41.8	225
	40-44	48.5	328
	45-49	45.3	395
	50-54	51.7	290
	55-59	49.8	225
	60+	69.0	252
Religion	Christian	48.1	1,321
	Muslim	58.1	480
No. of living children	1	58.6	29
	2	53.8	169
	3	47.1	312
	4	47.8	433
	5	45.8	299
	6+	56.5	570
Health zone	Northwest	46.9	326
	Northeast	50.6	472
	Southwest	48.8	647
	Southeast	57.6	382
Ever visited FP clinic?	Yes	33.8	855
	No	66.2	921
Distance to FP clinic	Very far	59.1	352
	Just far	44.5	501
	Not far	49.4	779
Knowledge of any FP method	Yes	49.7	1,775
	No	88.5	52
Ever-use of any FP method	Yes	43.1	1,373
	No	74.0	454
All		50.8	1,827

Source: Field survey, 1998. — 'No response' cases are ignored.

3.2.4. Reasons for not using contraception

The reasons proffered by men with unmet need for not using contraception are presented in Table 6. The main reasons put forward by men relate to the side effects associated with methods (30%), religion (20%) and perceived inability of the wife to conceive (16%), factors that are relevant for family planning programme improvement. Approximately one quarter did not give any reason. Disapproval of contraception is an unimportant reason for not using contraception, as is often observed for reasons proffered by women. Other reasons that are not important for this sample include knowledge of methods, which does not cover in-depth understanding of the methods, cost of the methods and irregular supply of commodities.

Table 6
Percentage distribution of urban men who desire to limit family size by reasons for not using contraception

Reasons	Percent
Fear of side effects	29.8
No reason	25.6
Against religion	20.2
Wife at menopause/cannot conceive	16.3
Not sexually active	3.5
Ineffectiveness of method	1.3
Wife disapproves	1.3
Lack knowledge	1.2
Cost of method	0.4
Unavailability of methods	0.4
N	928

Source: Field survey, 1998.

3.3. Multivariate analysis

Estimates of logistic regression equations that relate unmet need to selected variables associated with the respondents and family planning service are presented in Table 7. In the first model, selected background variables of the respondents and the health zone of residence are taken

Table 7
Logistic regression of unmet need for family planning, urban Nigerian men, 1998

Variable	Model 1		Model 2	
	Coeff.	Exp (β)	Coeff.	Exp (β)
Education				
None (r)	---	---	---	---
Primary	-0.3248	0.7227	-0.3835	0.6815
Secondary	-0.4653	0.6280*	-0.4127	0.6618**
Tertiary	-0.4669	0.6270*	-0.2425	0.7847
Age	0.0217	1.0219*	0.0205	1.0207*
No. of surviving children	0.0137	1.0138	0.0064	1.0064
Religion				
Muslim (r)	---	---	---	---
Christian	-0.4680	0.6262*	-0.3321	0.7174**
Other	-0.5231	0.5927	-0.6116	0.5425
Birth in the last 12 months				
Yes (r)	---	---	---	---
No	0.1078	1.1138	0.1051	1.1108
Health zone				
Southeast	0.5482	1.7301*	0.5166	1.6763*
Southwest	0.1366	1.1464	0.0853	1.0890
Northwest	-0.2020	0.8171	-0.2506	0.7784
Northeast (r)	---	---	---	---
Distance to FP service point				
Very far	Na	Na	0.1872	1.2058
Just far			-0.1272	0.8805
Not far (r)			---	---
Ever visited FP clinic				
Yes	Na	Na	-1.2424	0.2887*
No (r)			---	---
Constant	-0.5850	-0.0888		
-2 log likelihood	-2416.32*	-2255.55*		
Model chi-square	0.641	148.807*		
Overall classification	58.68	65.63		
N	1,798	1,798		

r = reference category.
* Significant at p< 0.0001 ** Significant at p< 0.02.
Source: Field survey, 1998.

together. The zone seeks to represent the zonal distribution of health facilities, both private and public, which are unevenly distributed. Together, the background variables such as education, age, religion and zone are related to unmet need.

Generally, formal education of both men and women is expected to positively influence contraceptive use. This expectation is confirmed in the regression analysis, with men's education observed to be negatively related to unmet need, but is significant for only secondary and tertiary education. Relative to men with no education, those with primary education are 72% less likely, secondary and tertiary are 62% each less likely to have unmet need. Employing education as an indicator of poverty, it would be appropriate to conclude that the poor are more likely to have unmet need.

In a society like Nigeria with low contraceptive prevalence, the likelihood for unmet need to increase with age is expected. In this model, age is positively associated with unmet need and it is significant. An increase in age by one year leads to an increase in unmet need by a factor of 1.02. A similar relationship as obtains for age is expected for surviving children. It is observed that a unit increase in the number of children surviving leads to an increase in unmet need by a factor of 1.01.

No religious tenet hinders the use of contraception, except Catholicism, which restricts members to natural methods. On a regional basis as indicated earlier, contraceptive prevalence is lower in the north compared to the south, and this may be attributed to a lower educational status of both men and women in the north compared to the south. Polygyny is also more prevalent in the north compared to the south because of the dominant religion of Islam and Christianity that obtain, respectively. The expectation therefore is that more Christians compared to Muslims would use contraception. The model confirms this expectation, as Christians are 62% less likely and adherents of traditional and other religions are 59% less likely to have unmet need relative to Muslims. The relationship is significant for Christians.

Men who had no birth in the household within the last 12 months are more likely to have unmet need relative to those who report a birth, although the relationship is not significant. This is expected because such women may be covered by the effect of breastfeeding and may not have resumed sexual relations. By health zone, while the southeast (1.7 times) and southwest (1.5 times) are relatively more likely to have unmet need compared to the northeast, the northwest is 82% less likely to have unmet

need compared to the northeast. The observed difference is significant for the southeast only.

The introduction of the two variables related to family planning service in the second model creates some variations in the results obtained in the first model, which employs only background variables. The significant relationship for the tertiary education category, which was observed earlier, ceased to be, although that of secondary education remained statistically significant. Christianity, which was significant in the first model, remained so, but at a lower level of significance. Respondents who described the distance of their place of residence from the family planning service point as very far from a family planning clinic are 1.21 times more likely to have unmet need as compared with those who described it as not far. Those who described this distance as just far are 88% less likely to have unmet need relative to those not living far away. Visitation to a family planning clinic is also statistically significant. Those who have visited a family planning clinic are 29% less likely to have unmet need as compared with those who have never visited.

4. Discussion of findings and recommendations

Despite the high value attached to children in all the cultures in Nigeria, it is becoming more apparent by the proportion indicating a desire to limit childbearing and the responses to the ideal number of children from various surveys that couples desire to control their fertility. The increasing desire to limit childbearing is strongly associated with economic factors brought about by the long-drawn economic depression with which the country is contending. Despite this fact, however, contraceptive uptake remains very low, notwithstanding the high awareness of contraception that prevails. The non-use of contraception is related to the apprehension of the perceived or associated side effects of both temporary and permanent methods. The existence of a large unmet need for childbearing as shown in this study is therefore not surprising.

The computed unmet need for men, given the limitation of the data, cannot be directly compared with the estimated level for women using the Demographic and Health Survey data. Despite this fact, the estimated unmet need for contraception for men in this study supports the claim that a substantial unmet need obtains in Nigeria. It is also evident that the awareness of methods of contraception is not a sufficient indicator of the

understanding of how the methods work. It is apparent that high levels of unmet need, particularly for limiting childbearing, obtain both among the poor and the rich, using education as an indicator**.** The level is, however, higher among the very poor compared to the other socioeconomic strata. The data on methods reported for ever-use of contraception indicate that traditional methods are prevalent among those currently using contraception. The risk of failure attached to such methods connotes that even those identified as not having unmet need require more efficient methods.

The direct cost of obtaining contraception in Nigeria is not a major hindering factor, as is observed from the reasons proffered for current non-use of contraception. Other indirect costs such as transportation, waiting time and quality of service, perceived risk of pregnancy and attitude of health providers, may constitute a hindrance, although these are not explored in this study. Fear of the side effects of contraceptive methods and religion are cited as reasons hindering contraceptive uptake. Religion appears now and again as a reason for not using contraception, although none of the major religions is against its use – only the Catholic Church, which prohibits its adherents from the use of methods other than the Billings method or periodic abstinence. Interpretations in religious texts such as the Bible and the Koran are used to support high fertility. While a direct quotation may be cited to support high fertility in the Bible, reference to the possibility of men marrying four wives is often used to support high fertility for adherents of Islam, based on the reasoning that husbands with many wives cannot restrict any wife to a number lower than the highest number of children that obtain for any wife. It is only through informal educational strategies employing religious leaders that this notion can be corrected.

Despite the fact that this group of men has had the desired number of children, the health risk in using effective contraception seems to outweigh the risk of unplanned pregnancy. This is similar to the observation Otoide and associates (2001) made among adolescents who consider the immediate threat of abortion to fertility to be lower than the use of modern contraception, and the risk of side effects also accounts for not using effective contraception among the group. According to Stash (1999) individual's and couple's use of contraceptives is strategically planned by them in order to reduce the chances of experiencing negative social, economic or health outcomes. Although both the poor and rich make this assessment, poverty could heighten the perceived risk of contraceptive use because of the low expectation of any form of assistance from any

source when confronted with difficulties. Such difficulties relate to the indirect cost associated with illness and loss of work, which can be considerable. The fact that the future must be protected from unforeseen accidents of infant mortality may also account for the low recourse to permanent methods such as sterilization by both males and females in Nigeria. This method is likely to have little or no side effects and would be suited for those wishing to limit childbearing.

The high unmet need for limiting childbearing connotes that the four children per woman policy of the government may be difficult to achieve, given the possibility of unplanned pregnancy that exists among individuals who desire to limit childbearing but do not employ effective contraception. The option available to such couples in the case of unplanned pregnancy is either carrying the pregnancy to term or resorting to abortion, which is presently illegal in the country, although available clandestinely (Makinwa-Adebusoye *et al.*, 1997). Both options available to these women have negative implications for the maternal mortality level, which is high at present.

Another conclusion that can be reached in this study is that proximity to a family planning clinic is a major factor affecting unmet need. At present, the approach of waiting for the clients to come to the family planning service points may not effectively reach the needs of the poor, who feel inferior due to several years of lack of appropriate clothing to wear to the clinic or the perceived imagination of how the very neat health workers would ill-treat them. For the very poor, therefore, other strategies may have to be developed.

Formal education is yet another important factor that is observed to lower the existence of unmet need. By deduction, it is implied that informal education in family planning with more in-depth focus than obtains presently should bring about an improvement in the uptake of contraception for the general population, and specifically for those with unmet need for limiting childbearing. These educational programmes should focus on the issue of side effects that is observed to account for a large proportion of the reasons for unmet need.

The definition of unmet need employed in this paper is simple but in no way detracts from its significance. Further research allowing of a more sophisticated definition to ensure the comparability of estimates of unmet need for contraception for men and other groups so as to better understand and articulate programmes is in order. This will contribute in no

small measure to ensuring improved reproductive health for all and participation in development activities.

References

BANKOLE, A., and A. C. EZEH (1999), "Unmet need for couples: An analytical framework and evaluation with DHS data", *Population and Policy Review*, vol. 18, December, p. 579-605.

EZEH, A. C. (1993), "The influence of spouses over each others contraceptive attitudes in Ghana", *Studies in Family Planning*, vol. 24, no. 3, May-June, p. 163-174.

FOS (FEDERAL OFFICE OF STATISTICS) (1992), *Nigeria Demographic and Health Survey, 1990*, Columbia, MD, Federal Office of Statistics and Macro International Inc.

FOS (FEDERAL OFFICE OF STATISTICS) (1999), *Poverty Profile for Nigeria 1980-1996*, FOS, Lagos.

FRN (FEDERAL REPUBLIC OF NIGERIA) (1988), *National Policy on Population for Development, Unity, Progress and Self-Reliance*, Federal Ministry of Health, Lagos.

FINGER, W. R. (1992), "Getting more men involved", *Network,* vol. 13, no. 1, August, p. 4-6.

ISIUGO-ABANIHE, U. C. (2003), *Male Role and Responsibility in Fertility and Reproductive Health in Nigeria*, Printmarks Ventures Limited, Ibadan.

KIRAGU, K., S. CHAPMAN and G. L. LEWIS (1995), *The Nigeria Family Planning Facility Census. IEC Field Report Number 1*, Center for Communication Programs, The Johns Hopkins School of Public Health.

MAKINWA-ADEBUSOYE, P., S. SINGH and S. AUDAM (1997), "Nigerian health professionals' perceptions about abortion practice", *International Family Planning Perspectives*, vol. 33, no. 4, December, p. 155-161.

NPB (NATIONAL POPULATION BUREAU [Nigeria]) and WORLD FERTILITY SURVEY (WFS) (1984), *The Nigeria Fertility Survey 1981/82: Principal Report. Vol. 1: Methodology and Findings*, Lagos, Nigeria, National Population Bureau.

NPC (NATIONAL POPULATION COMMISSION [Nigeria]) (2000), *Nigeria Demographic and Health Survey, 1999*, Calverton, MD, NPC and ORC/Macro.

NGOM, Pierre (1997), "Men's unmet need for family planning: Implications for African fertility transitions", *Studies in Family Planning*, vol. 28, no. 3, September, p. 192-202.

ODUMOSU, O., F. O. N. ROBERTS, A. T. SIMBINE, S. A. BENJAMIN, I. S. OMISAKIN, E. N. NELSON-TWAKOR and A. O. AJALA (1998), *Demographic and Economic Characteristics of Urban Households in Nigeria*, Population Research Fund Management Unit, NISER.

OTOIDE, V., F. ORONSAYE and F. E. OKONOFUA (2001), "Why Nigerian adolescents seek abortion rather than contraception: Evidence from focus-group discussions", *International Family Planning Perspectives*, vol. 27, no. 2, June, p. 77-81.

STASH, Sharon (1999), "Explanations of unmet need for contraception in Chitwan, Nepal", *Studies in Family Panning,* vol. 30, no. 4, December, p. 267-287.

WORLD BANK (1999), *Knowledge for Development: World Development Report*, The Oxford University Press, New York.

WORLD BANK (2001), *Attacking Poverty: World Development Report 2000/2001*, The Oxford University Press, New York.

Part III

THE DETERMINANTS OF REPRODUCTIVE AND SEXUAL BEHAVIOR AMONG ADOLESCENTS AND YOUTH

5

POVERTY, SOCIAL VULNERABILITY, AND ADOLESCENT PREGNANCY IN MEXICO: A QUALITATIVE ANALYSIS

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1. Introduction: Justification and some clarifications

Adolescent pregnancy and its consequent problems have appeared prominently in the international agenda of reproductive health issues for more than a decade. A varied but significant and frequently growing percentage of births occur amongst adolescent girls in many developing countries, and a number of important population, health and other individual, family and social problems are imputed to this phenomenon (United Nations, 1989; The Alan Guttmacher Institute,

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I wish to thank Soledad González, Duncan Pedersen, Iqbal Shah, and Edith Pantelides, for their comments and suggestions on a first draft of this paper, and particularly Susana Lerner, for her detailed and constructive comments and suggestions for improvement on the first and a second version of it. I have made an effort to consider all their comments but as usual, full responsibility for the contents of this article is mine.

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1990; Bongaarts and Cohen, 1998). Consequently, multinational and international organizations, national governments, and many NGO's are devoting increasing efforts and resources to try to grapple with the issues involved.

However, as it has been suggested by various authors (Nathanson, 1991; Luker, 1996; Stern and García, 2001), there is a need to complement existing studies in order to deepen our understanding of the questions involved. On the one hand, adolescent pregnancy needs to be placed and understood within the processes of social and cultural change that are taking place in specific countries and social contexts (Safe Passages to Adulthood, 2001; The Alan Guttmacher Institute, 2001). On the other hand, instead of assuming what the needs of adolescents are in terms of their sexual and reproductive health, we have to get closer to their concrete lives, their beliefs, attitudes and values, their interaction with their parents, peers and partners, their objective opportunities and subjective aspirations, in order to be able to assess their needs and, starting from them and from accumulated knowledge regarding successful policies and programs, gauge whether interventions are necessary in order to improve their sexual and reproductive health and, if so, what kind of actions could and should be taken (Population Reports, 1995; Mensch *et al.*, 1998).

In terms of the need to contextualize the issue of adolescent pregnancy, research and publications linking this question to social inequality and with poverty have been slow to develop, particularly in the more industrialized countries (for some exceptions, see Luker, 1996; Singh *et al.*, 2001; Selman, 2002; Guzmán *et al.*, 2001), leading to generalizations which do not take into consideration the high diversity of conditions in which young women find themselves. To give an example, lack of information and little access to contraception have been emphasized as two of the foremost factors leading to early pregnancies and childbirth, but only rarely is it acknowledged that poor women living in rural areas in Latin America have often very few options other than to become mothers during the so-called period of adolescence and that, therefore, information on reproductive matters and access to contraception will have little meaning for these young women unless opportunities arise for them to envisage a different future. Only then will it be meaningful for them to postpone pregnancy and childbirth.

From another point of view, the highly prevalent perspective which purports adolescent pregnancy *per se* as an undesirable phe-

nomenon, almost as a disease that should be eradicated, and as a phenomenon which necessarily has negative consequences, ought to be strongly questioned. For many women in the world it continues to be the best option they have. For them, their partners, their families and their communities it is not a problem at all, oftentimes quite the contrary (see Geronimus, 1992). And many of its imputed consequences are a result not of the age at which the pregnancies occur, but of conditions pre-existing the pregnancies, such as poverty, malnutrition, poor health, lack of accessible health services, etc. (see Geronimus, 1987, 1991; Geronimus and Korenman, 1992, 1993a, 1993b). This is not to say that there are no problems related to adolescent pregnancy, but there is a great need to disentangle what problems there are, for whom they constitute a problem, and who can and should do something about them. Although it is not its explicit objective, this paper constitutes a continuation of our own efforts to clarify these questions (see Stern, 1997; Stern and García, 2001).

In terms of research strategies, it is necessary to get involved in qualitative research, in order to have a better understanding of the way in which elements situated at different levels of analysis – societal, family, individual – interact in the process of a young girl getting – or not getting – pregnant early in her life. And this research needs to be undertaken with different groups of the population, so that we understand why population groups tend to experience early pregnancies in different degrees.

The knowledge derived from this qualitative research can then be used to improve both social policy and programmatic interventions directed to improve the conditions leading to unwanted or undesirable early pregnancies, as well as to design better instruments for quantitative research.

2. Objectives

The analysis presented in this paper forms part of a larger project directed to uncover the meaning which adolescent pregnancy has for different social sectors of the Mexican population, the mechanisms involved in determining or influencing the occurrence or not of adolescent pregnancies in each of them, as well as in determining and in-

fluencing the outcomes of such pregnancies (see Stern, 1995b, 2003).[3]

Preliminary analyses of a number of in-depth interviews with adolescents and youngsters, which form part of that project, made it clear that what is here called 'social vulnerability' was an outstanding dimension underlying the occurrence of early pregnancies. It also became clear that what appear in the literature as variables which determine or influence adolescent pregnancies (Hayes, 1987; OPS, 1988; Silber *et al.*, 1995) do not operate in isolation or in the same way in different social contexts, but that it is the combination and interaction between several elements and circumstances which 'explain' why there tend to be a greater number of adolescent pregnancies in some social sectors than in others (Geldstein and Pantelides, 2001a).

The main objective of this paper is to illustrate, through the analysis of specific case studies, how poverty and social vulnerability interact with adolescent pregnancy. Thus, the aim of this particular paper is more closely related to understanding the underlying "causes" of adolescent pregnancy than to explore the different "meaning" which these pregnancies have in different sectors of the population, which is the overall purpose of the general project of which this paper forms part.

An effort is also made in the paper to identify some of the components of social vulnerability which can be inferred from the case studies as well as from previous research, which could be defined as variables to be used in further studies aimed at looking more systematically at the relationships between poverty, social vulnerability, and adolescent pregnancy. Possible indicators for these variables are also proposed.

Finally, some thoughts and recommendations on how the results of the analysis can bear upon social policies and programs are presented.

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3. The research project is entitled "The meaning and implications of adolescent pregnancy in different sociocultural contexts in Mexico" and was partially funded by the Mexican National Council of Science and Technology (Project 26089-S) and by the Special Programme of Research, Development and Research Training in Human Reproduction of the World Health Organisation (Project 98127BSDA). I cannot list here the names of the many researchers and assistants who participated in this project over a period of five years (1998-2003), but wish to mention and thank some whose collaboration in the field work, description, analysis, and synthesis of the information used for this article were prominent: Elizabeth García, Teresa Elizabeth Cueva, Yuriria Rodríguez, Alicia Pereda, and Diana Reartes. For a more detailed description of the project see Stern, 2003.

3. The locus of the problem

3.1. Inequality, poverty and adolescent pregnancy in Mexico

Social and economic inequality in Mexico, as in most other Latinamerican countries, is pervasive. The 10% of households with the highest income receive more than 40% of total income, while the 10% of households with the lowest income receive only 1% of the total income (Cortés, 2001, p. 928).

Poverty is also very extensive. According to official estimates based on the 2000 National Survey on Income and Expenditures of Houselholds, 31.9% of households are poor, defined as those

> "which income is insufficient to cover the needs of feeding, health, and education – equivalent to 18.9 and 24.7 pesos of 2000 [approximately 1.9 and 2.5 US dollars] daily per person in rural and urban areas, respectively." (Cortés *et al.*, 2002, p. 9 and 16).[4]

Adolescent fertility in Mexico – considered as that taking place among women aged 15 to 19[5] – diminished from a rate of 132‰ in 1975 to 81‰ in 1995 and 72‰ in 1999 (Zúñiga *et al.*, 2000, p. 20)[6]. This rate is considered too high by the Mexican Government, particularly considering that a great proportion of these pregnancies are apparently unintended.

Moreover, there is evidence of great differences between social classes, strata, or groups in the incidence of adolescent pregnancy in Mexico. To give an example: in 1997 the fertility rate for 15-19 year-old adolescents by educational level (often used as a proxy for socioeco-

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4. A more stringent definition, including only the cost of feeding, brings down the percentage of poor households to 24.2, while a more comprehensive definition, including not only the cost of feeding, health and education, but also that of clothing, footwear, housing, and public transportation, brings the percentage to 53.7 (*op. cit.*).

5. Age 15 is taken as a base-point because most surveys on which fertility rates are computed include only information on "women in reproductive ages", defined as those 15-49.

6. Figures about adolescent pregnancy in Mexico have traditionally been reported – both by official institutions and by academics – in terms of fertility rates. Since the incidence of abortions in adolescents is estimated to have been rather low and diminishing over the last decade (see Núñez, 2002, p. 22), not much attention has been given to possible differences between both, something which can become important when analysing different social strata, given that abortion among adolescents may be more prevalent in some strata than in others (Stern and Menkes, in progress).

nomic status) was 213.6‰ among women with no schooling, 158.6‰ for women with less than primary education, 122.3‰ among those with complete primary education, 87.8‰ among those with secondary education, and only 27.1‰ among women with preparatory and university education[7] (Menkes and Suárez, 2002, based on data from ENADID, 1997; see also CONAPO, 2000 and Welti, 2000). Using the same data as Menkes and Suárez, we have calculated that while only 3.5% of 15-19 year-old adolescents from the upper socioeconomic stratum of the population had ever been pregnant, this figure increases almost sixfold – to 20.2% – for adolescents from the lowest stratum (see Figure 1).[8]

Evidently, the propensity to become pregnant during adolescence varies between social groups, strata, classes or sectors of the population. The question addressed in this paper refers to the reasons for such an uneven distribution. What is it about the different social groups that explains or underlies these different propensities?

3.2. Social vulnerability

The term vulnerability has various meanings. Etymologically it means to be susceptible to become hurt, to receive a blow, physically or morally. In more general terms, it refers to the property of materials, human individuals, social groups, complex systems, etc., which turns them unstable under the action of external disturbances (see Ford, 2002). In more abstract terms, as stated by Rubalcava (2002, p. 7) paraphrasing Popper (1992), vulnerability can be thought of as a propensity or trend in the probabilities of occurrence of a phenomenon.

The concept of ***social*** vulnerability, in its turn, has been widely used and applied to a variety of phenomena (Delor and Hubert, 2000). Ecologists, environmentalists and earth scientists apply the concept to

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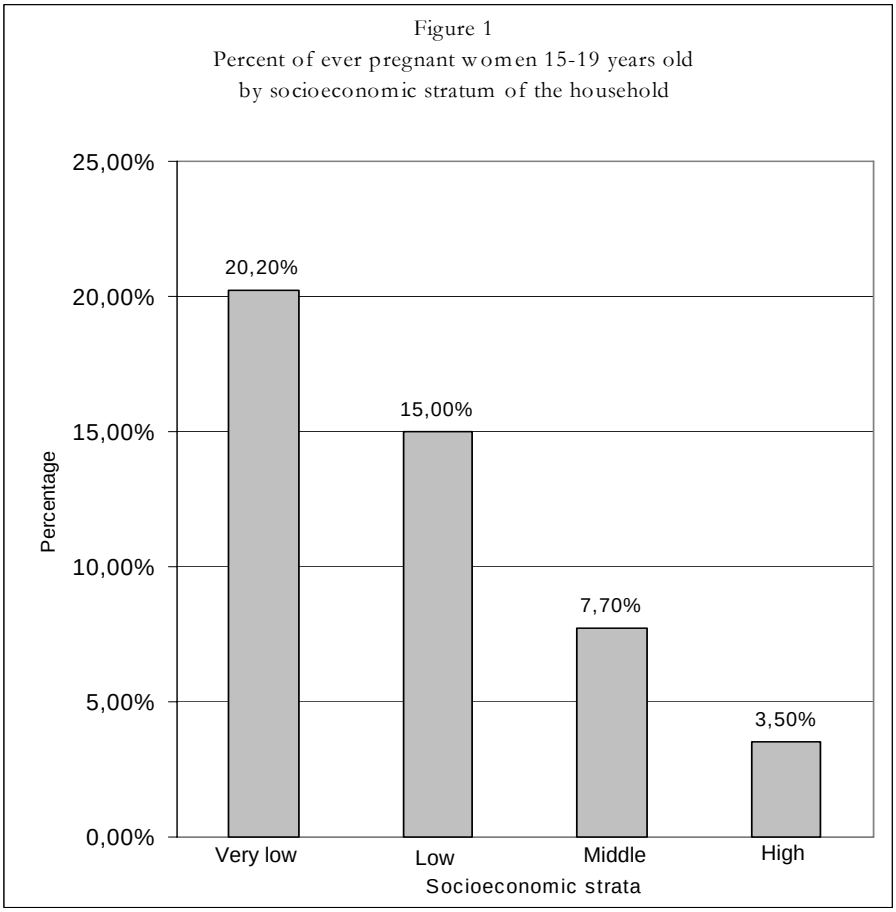
7. In Mexico schooling is divided into primary (6-11 years old), secondary (12-15), preparatory (16-18) and university (19 and beyond).

8. Socioeconomic strata were defined taking the following household variables: quality of the dwelling unit, access to material services such as running water and electricity, weighted average relative schooling of family members, and occupation of the individual with the highest occupational level [occupational level having been defined in terms of the relative income perceived by individuals who occupy different occupations in Mexican society, according to the 1997 Demographic Survey (ENADID 1997)].



Source: Stern and Menkes, in process, based on ENADID 1997.

conditions which are conducive to greater risks and negative consequences derived from the occurrence of natural phenomena – such as earthquakes, hurricanes, etc., on a population (Ford, 2002). Social scientists, particularly in Latin America, apply the concept to the conditions forced upon some social groups due to structural adjustments and macroeconomic changes (Pizarro, 2001; Villa and Rodríguez, 2002; Filgueira, 1998, p. 123-129), which make them more susceptible to conditions of unemployment, insecurity, and poverty. It is also widely applied to specific groups of the population – women, children, the elderly – who are thought to be more susceptible than others to certain phenomena, such as illness or maltreatment.

Some definitions of vulnerability include not only a negative dimension associated to greater risks, but also a positive one related to the characteristics influencing the ability of people and communities to respond to, cope with, and adapt to an adverse stimulus or event (Ford, 2002, p. 12; see also Delor and Hubert, 2000, p. 1562). This ability is known under other theoretical perspectives as *resilience*, a term increasingly used in the social sciences and particularly important in terms of social policy (see Kotliarenko *et al.*, 1997; OPS, 1999). The concept of resilience designates the ability to emerge from adversity, to adapt, to recuperate from adverse circumstances. It can be used to address phenomena at various levels, including communities, families and, particularly, individuals. Vulnerability and resilience can be understood as the negative and positive pole of the same concept (Kotliarenko *et al.*, 1997, p. 11), but resilience can also be used to relate individual responses to social vulnerability; more particularly, to designate the protective factors operating at the individual level, which allow some members of the same community to resist, cope with, adapt to, and emerge from the adverse conditions of social vulnerability prevailing in their community. It is in this last sense that the concept will be used in this article.

Departing from various of these meanings, we propose to define social vulnerability, for the purpose of this article, as the differential propensity of social sectors of the population – also called in the text 'sociocultural contexts' or 'social groups' – for the occurrence of adolescent pregnancies. We propose that this propensity for early pregnancies varies between sociocultural contexts, and that this variability is linked to specific social and family characteristics of the contexts, which predispose or, on the contrary, protect young girls from becoming pregnant and from giving birth early in their lives.

In other words, we would claim that there are certain social factors that help to explain why adolescent pregnancy is so much more prevalent in certain social groups that in others – which is the central interest of this paper. We aim to uncover and illustrate, through specific case studies of sociocultural contexts and of young girls living in each of them, characteristics which make them more susceptible to having adolescent pregnancies than is the case in other contexts.

It is true, as a matter of fact, that social vulnerability is closely associated empirically with poverty in most cases, but the relationship is a contingent and not a necessary one. There are ways in which vulnerability can be minimized even within poverty. Universal access to health ser-

vices, education, and social security is one. Developing or strengthening "social safety nets" is another, amongst others. Therefore the importance of the concept of social vulnerability.

What we are proposing is that social vulnerability, as here defined, is a more useful concept for understanding differential rates, meanings, and implications of adolescent pregnancy, than poverty. We want to go further from the empirical relationship between indicators of poverty and adolescent pregnancy in order to gain a better understanding of the processes leading to the fact that adolescent pregnancy and, particularly adolescent childbirth, are so much more prevalent in poor sectors of the population than in non-poor sectors.

3.3. About the concept of adolescence

The conception of adolescence underlying this study is a socioculturally relative one (Irvine, 1994, Ch. 1; Nauhardt, 1997). As a period of life between "childhood" and "adulthood", "adolescence" is a highly variable concept. In some cultures and sectors of the population of contemporary individual countries adolescence is not recognized as different from "youth", and the concept of adolescence might not even be recognized as such (Feixa, 1998, Ch. 1). In our project we tried to approach the question of how this portion of the life-course was defined in each of the settings studied.

Furthermore, although the period of life we were interested in was precisely that between childhood and adulthood, we decided to interview individuals who were more or less beyond "adolescence" and who could therefore tell us what takes place in the corresponding group – or what happened in their personal life – during that period, in terms of the themes of interest for the project, such as family background and relations, schooling, relations with peers, heterosexual relations, and aspirations or life plans.

The ages of our informants for the group and individual interviews – to whom we referred as "youngsters" in the previous paragraphs – ranged from 15 to 24 and were somewhat lower for young women of the urban marginal setting, where the period between childhood and adulthood – according to the results of our ethnographic work and of the group interviews – can be set approximately between

the ages of 12 to 17, than for young women of the upper-middle class, where "adolescence" extends well beyond the second decade of life.[9]

4. The study background, organization, and methods

Field work for the research project of which the analysis here presented forms part was undertaken between the years 1998-2001. It involved the use of three qualitative strategies applied successively: a) extended ethnographic research, which comprised: i) periodic visits to the communities studied, including both "passive" and "participant" observation, ii) semi-structured interviews with key informants, iii) semi-structured interviews with adolescents, young men and women and their parents, and iv) the collection of secondary data; b) group interviews with male and female youngsters; and c) in-depth interviews with female and male youngsters.

4.1. Organization of the study

Under the direction of the author of this paper as principal investigator (PI), associate researchers working at institutions located in or near the sites selected were hired, in order to carry out the field work, organize the information collected, and undertake a preliminary analysis of it, each with the colaboration of an assistant.

Results from the ethnographic phase of the project were synthesized by the respective researchers in the form of monographs, with a main common structure including the following themes: i) sociodemographic characteristics, ii) history of the settlement, iii) material conditions, iv) formal organizations, v) forms of interaction – family, couples, inter-generational, social networks –, vi) social participation, vii) daily life, viii) *emic*[10] perceptions about adolescents and youngsters, and ix) the perspective of the researcher about adolescents and youngsters.

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9. In Mexico youngsters from the upper-middle class are economically dependent and stay in their parents' house throughout their undergraduate and graduate studies, oftentimes beyond their 25th birthday.

10. *Emic* is a concept used by anthropologists to refer to the meaning given to something by the "native" population. Its obverse is *etic,* which refers to the meaning which an outsider, in this case the researcher, gives to something pertaining to the native culture.

Results from each of the group interviews (one with males and one with females in each context) were summarised by the corresponding researchers, following the structure of the interview guide, which included the following themes: i) from childhood to adolescence, ii) heterosexual relations in adolescence, iii) sexual initiation, iv) sexuality in adolescence, v) pregnancy before being 20 years old, vi) what happens after pregnancy, and vii) perspectives on the future life of participants.

Individual interviews were unstructured and consisted mostly of autobiographical narratives, starting from "Tell me about your life, your childhood, your parents..." and pursuing the continuation of the narrative with suggestive questions. Some interviews were analysed and synthesized by the researchers who carried them out and others – given money and time constraints – were left as transcriptions. However, in this case there was no pre-established guide that could lead to a comparable format for analysis and synthesis. Given the need to search for comparable information pertinent to the aims of the project, a synthesis and preliminary analysis of these interviews was made after completion of field work by an additional associate researcher, mostly following the themes covered in the group interviews.

The latter associate researcher, a PhD student in Social Anthropology, also helped the principal investigator to complete the integrated reports for each of the social contexts, synthesizing the results from the three phases of the project.

4.2. Sample and population

A purposive sample of communities was selected in order to test our assumption about the differential meaning and implications of adolescent pregnancy among sociocultural sectors of the Mexican population. Criteria for selecting them included both socioeconomic and cultural characteristics, since both were considered important. We hypothesized that adolescent pregnancy would assume different meanings (would have a different sense) and would have different implications, not only according to a "vertical axis" of social class or occupational stratification (peasantry, urban working class, upper middle class), but also to a "horizontal" axis of cultural differences deriving from diverging socio-historical formations associated to present economic and cultural conditions of regions along the Mexican territory

(for instance, the mostly indigenous southern regions, the conservative central western regions, and the more progressive and more recently settled northern border regions).

Taking into consideration the limited resources available as well as practical considerations – such as the availability of local researchers and distance from Mexico City – we decided to "condense" these differences by selecting five sociocultural contexts: a) an indigenous rural community in the southern State of Oaxaca; b) a "marginal" urban sector in Mexico City; c) urban "popular" (working class) sectors in two culturally different large cities: Tonalá, Jalisco, a conservative city with a traditional handicraft industry, and Matamoros, Tamaulipas, a city with modern assembly type industries on the border with the U.S.A.; and d) an upper-middle class sector in Mexico City.

From the five sociocultural contexts studied, we have selected three for the purpose of this article: the urban "marginal" sector in Mexico City, the urban "popular" sector in Matamoros, and the upper-middle class sector in Mexico City.

Roughly speaking and following Boltvinik (2001, p. 958), if we divide the Mexican population based on family income per capita into six strata: 1. Indigent (26.2%), 2. Very poor (13.7%), 3. Moderately poor (26.7%), 4. With satisfaction of basic needs and income requirements (9.1%), 5. Middle-class (15.2%), and 6. Upper class (9.0%), our analysis would illustrate the conditions of the second, third, and sixth of these strata. In other words, one can say that our three contexts reflect different degrees of poverty in Mexico: a very poor context, a moderately poor context, and the upper class (obviously a non-poor context) (for a more detailed analysis of poverty and social stratification in Mexico, see Boltvinik, 1994).

Thus, although we will not be able to generalize our results to the corresponding social strata, studying what takes place in the three social contexts selected will give an idea of what might be taking place more generally in terms of the dynamics conducive to adolescent pregnancy in population sectors belonging to different social strata.

4.3. Selection of informants

From information gathered through the first two methodological approaches used in the study – ethnographic work and group interviews – a definition was made of the more common situations experi-

enced by young women in each context *vis-à-vis* adolescent pregnancy. A purposive sample of young women representing these situations in each context was selected for in-depth interviews. For example, in the marginal urban context we identified: single adolescent mothers, adolescent mothers in consensual unions, and sexually experienced single adolescents who had never become pregnant. From contacts made during ethnographic work and the group interviews we looked for young women representing these situations and invited them to collaborate in the study.

The selection of informants for these interviews was made with the purpose of understanding and illustrating the different types of situations existing in each social group studied in terms of the occurrence or not of adolescent pregnancy, childbirth, and their respective sequels. Thus, we did not select for these interviews only young women who had become pregnant during adolescence, but also some who had not become pregnant.

Most interviews took two or three sessions of 2-3 hours each. They were recorded and transcribed, and in most cases analysed and synthesized in the form of individual reports. Analysis was undertaken manually and in some cases with the help of software packages Ethnograph and Nudist.

It might be pertinent here to reiterate that the intention of the analysis here presented is to explore an insight and to clarify, systematise and develop further ideas and hypotheses about the relationships between social vulnerability and adolescent pregnancy, to be tested in future investigations. We did not design a project to specifically test given hypotheses about these relationships – in which case the sampling procedures and the strategy of analysis would have had to be different – and we have not either undertaken yet a systematic analysis of all the information collected with the explicit purpose of exploring the relationships between social vulnerability and adolescent pregnancy.

5. Results

The first section of this part includes results in terms of the characteristics of the social contexts studied, derived from the extensive ethnographic work carried out in each of them and from analysis of

secondary information, as well as results in terms of the main characteristics of the young women selected for in-depth interviews.

Given space limitations, we have selected only one of the four young women interviewed from each sociocultural context for this article. The selection has been made purposely, taking those cases which appear as more typical of each context and which life stories could best illustrate our arguments about social vulnerability. A table comparing some of the characteristics of these three women is included in the Appendix.

In the second section we present a preliminary interpretation of these results in terms of their relationship with differential poverty and social vulnerability.

5.1. Characteristics of the social contexts and study cases in each

5.1.1. The urban marginal context

Hornos, the marginal community included in our study, has approximately 8,500 inhabitants. It is located in the south of Mexico City, in the midst of now highly urbanized neighbourhoods and large public apartment buildings.

As most other urban-marginal communities in large cities such as Mexico City, Hornos is characterized by the following traits: a) precarious sanitary infrastructure (few paved streets, precarious housing, scarce sewage, no in-house running water); b) unstable employment, mostly in the informal sector, and low income; c) low schooling (an average of less than 6 years); d) scarcity of public services (schools, health clinics, sports facilities); e) high visibility of youngsters in the streets; f) alcoholism, drugs as part of the public image; and g) many "incomplete" families and feminine-headed households.

Children and male youngsters spend most of their time in the streets of the community, which makes their behaviour highly visible to others. As one informant told us:

> "Since parents are sometimes also very young, they don't look after their children; you can see even children taking drugs or drinking on the very street!"

The majority of adult women are in their households most of the time. Men are in and out of the community depending on their having

or not having paid work to do. Many work in the construction industry and take their sons to learn the craft:

> "There are many people here who work in masonry and they take along their sons ... twelve, thirteen, fourteen years old."

According to our informants, childhood tends to come to an end (*"dejan de ser niños, mocosos"* [they stop to be children, mucky]) approximately at 11. "Adolescence" (not recognised as such, named as *"muchachos"* [lads], *"muchachas"* [lass]) ends at 15-16, when most kids have left school. Boys work intermittently, often in the construction industry, and become relatively independent from their families. Contrariwise, most girls do domestic work at home and take care of their younger siblings, tasks with which many of them were burdened since puberty. Some adolescent girls work outside home, usualy as domestic servants or in assembly factories.

> "The assembly factories accept [people] from ages sixteen or fifteen, and the women work there."

Life histories tend often to be dramatic, within a context of economic scarcity (poverty), family rupture, alcoholism, and domestic violence. As we could observe during the course of our study, the insecurity, vulnerability and precariousness of life stand out in many of them.

We have selected the case of Guadalupe in order to illustrate the situation which young girls in this social context go through during their "adolescence". Guadalupe is sixteen years old and lives with her partner and her one-year-old son in a room in her father-in-law's house.

Living conditions, the environment in Hornos, and Guadalupe's life context

Guadalupe was born in a small town in the surroundings of Mexico City. She is the only remaining child, after her parents lost two children, one at birth and the other at two years of age. During her childhood, her parents moved from one place to another looking for a dwelling place until they came to Hornos where, after several years of struggling, they got some land of their own to build a house. Guadalupe's father and mother have always worked intermittently and in non-formal occupations; Guadalupe herself has helped them at various times with their work.

Her testimony is full of references to the context of violence in which she lives. Violence in the city (an assault at a nearby mall in which her father was a passive victim and which marked a turning

point in her life); violence in Hornos (an assault to her father when she was a child and the subsequent killing of one of the youngsters involved in it); pot-smoking and alcohol consumption in the streets of Hornos, with constant molesting of young girls.

Just to give two examples. About the assault to her father Guadalupe narrates:

> "…my father says that he was kicked by them, they took everything from him … and they say that they went to leave him like that someplace; I think they thought he was dead … and later they killed one of them … of the same ones that had assaulted my father, they tried to assault a bus … and the driver didn't let them … and he drove over one of them, one who stood in front of him … and he died … and all of them were in jail…"

When asked about how she sees life in Hornos she said:

> "Well, very bad, very bad. Yes, there are many thieves, there are many *mariguanos* [pot smokers] everywhere … Then you go to the stores and there's a bunch of drunkards, and then they start teasing you, saying indecent things…"

Guadalupe also touched upon various forms of family violence in her narrative: she relates instances in which she was frequently beaten as a child, her father and mother beat each other, her drug-addict uncle took away things from her and humiliated her, she beats the children she takes care of, her partner consumes cocaine and takes her baby away from her, etc.

It is quite clear that Guadalupe's social conditions are indicative of great poverty, violence, and social vulnerability.

Schooling and aspirations

Guadalupe left school when in second year of secondary (8th grade), at fourteen. Her school trajectory is indicative of the obstacles existing in these environments for remaining in school. When she was in 4th grade her mother participated intensely in meetings, marches, and bureaucratic procedures aimed at getting a plot of land, and she often took Guadalupe with herself. As a consequence, Guadalupe flunked and had to repeat 4th grade. At fourteen, she had to accompany her mother to look for her father, who disappeared for three months after being involved in an accident (more about this incident in the next section). As a result, she got behind in school, could not confront adequately the term examinations, and left school.

It is important to mention that, according to her own statements, Guadalupe did not want to leave school. Although she mentioned that she was not good in Mathematics and English, she said that she did not have a low average. She got back to school and tried to go on after her father was returned home, but apparently she did not get the necessary support for it:

> Interviewer. "Was it difficult [to continue studying]?"
> Guadalupe. "It was not difficult, what happens is that I had many problems because my father got lost for a time […] so I stopped going to school, and then the quarter went through and then I was already in the middle of the next one, and then when my father appeared I went back to school and they accepted me, because I did not have a low average, … but … the director told me that they would give me a hand, yes, that they would pass the class notes on to me and all that, and that they would give me the chance to present the other quarter which I had lost, but it didn't happen like that. That is, it was only at that moment that the director said that, and then the teachers didn't give me any support or anything, then when the other quarter came … they gave me my exam and all that, yes, but what was I going to do? If I had never seen anything of what was in the exam? … they were new things, and so I flunked and … well … I decided I better leave…"

In another part of the narrative Guadalupe said:

> "…I did want to go on studying, yes? And because of that, that I wanted to go on studying, they didn't dismiss me … when I missed school for various months, and the teacher was going to give me an opportunity because I had good grades."

In social contexts such as Hornos, where day-to-day pressures just to survive and go on are so strong, it is difficult to talk about aspirations and life-plans. Through her narrative we can see that Guadalupe had a clear desire to have a baby. She said:

> "…I always told my mother that even if I don't marry, at least I want to have a baby to see what it feels like…"

Now that she has one, she is very fond of it, and she likes children so much that in spite of her daily chores and precarious economic situation, she offered to take care of her neighbours' children.

Guadalupe also mentioned that if she could have gone on with her studies, she would have liked to study Pedagogy, that she liked reading

and poetry very much, and that she would like to go on writing poetry, like she did before getting pregnant.

We can not know what would have occurred if Guadalupe would not have gotten pregnant, but it is clear that: a) she did not leave school because not wanting to continue with her studies, and b) it is clearly not the case that she wanted to get pregnant at the time she did because of her desire to have a child. Having gotten pregnant and having left school at fourteen were both unplanned and are intimately related to each other, but not in a simple causal relation. Moreover, as we will see next, both are in some way related to the temporary disappearance of her father.

The temporary disappearance of her father as the central meaningful event in Guadalupe's life

Guadalupe's narrative makes it clear that the disappearance of her father is a central event in her life. She talks about it when asked why she left school:

> "…I had many problems, because my father got lost for a time; there was an assault here in Perisur [a large mall] … my father … lost his sense [became unconscious] … My father was passing by and he got into a state of shock, because … a policeman was shot and he fell dead on my dad … and that put him in a state of trauma … and then he was lost for a long time. […] For about three months I believe; maybe more. Then … at that time I went to secondary school, and all that time I … that is, since I follow my father very much, well... I missed him, I didn't eat any more, I fainted all the time from not seeing him and all that, no? Then I stopped going to school."

After they found her father, she and her mother had to take care of him:

> "…well, he came back being very skinny, and he didn't recognize any more, that is, like if he was afraid to talk to people … I think because of the same reason. And so he was there at home for some time, and we took care of him … and then after some other months he became well."

It is evident that her father's disappearance meant a great blow to Guadalupe, both objectively and subjectively. It is the central event of her narrative. Whether or not it implied a change in the "trajectory" of her life (Rieman and Schütze, 1991) is difficult to evaluate, but it is

certainly the case that it is directly related to her having left school and probably indirectly to her having gotten pregnant at such an early age.

Sexuality, pregnancy, and knowledge about reproduction

Guadalupe became pregnant at fourteen, after her father was found and returned home. She had gone back to school. She became the sweetheart ("*novia"*) of a friend of hers, they 'got together' (had sex) and she became pregnant. In spite of our efforts to inquire, we have few details in her narrative about how things happened. When asked how it was that they started to become intimate, she only answered:

> "Well, because I loved him very much and he loved me very much and we had had sexual relations before, but I never thought I would become pregnant."

She got pregnant about a month after having started to have sex with her partner, and her pregnancy occurred two or three months after she left school. This was not the first man with whom she had sexual relations, though:

> Interviewer. "I'd like to talk about your first sexual experiences … when did they take place?"
> Guadalupe. "I don't even remember any more. But I had my first sexual experience well … when I was about thirteen, I think. But my mom doesn't know anything, if not they're going to kill me! Yes … well … with a lad ["*chavo*"] … well, he was quite grown up, compared with him I was a child, he was about 20, … no, about 18…"

Elsewhere in the interview:

> "…he was my neighbour… I met him …and we became …well sweethearts and I … I also didn't know yet even what all that was about, yes? [she's probably referring to having sex], I was only starting. Oh my, only starting!…"
> Interviewer. "And you were thirteen?"
> Guadalupe. "Yes … and it was then … and then I didn't have sex again until I got together … with Pedro [the father of her child]."

She never told anyone. Further down the interviewer asked her:

> Interviewer. "¿How was that decision taken … Guadalupe, you took it? … Or how did it happen?"
> Guadalupe. "Things happened like that … I tell you it's always curiosity, yes? … You see … one is in an adolescence and all that … Moreover they never explained to me … Like I have told my mom, she always told me "don't smoke, don't drink", but she never told me

> why or what effects it caused, what happened or how I could be harmed. They only said "Don't do it!" … so there one goes out of curiosity … to see how it feels."

She said that after this experience she felt like she better didn't get involved with other youngsters; "friends yes but sweethearts no", but she did get involved with Pedro a year or so later.

Knowledge about reproduction in these sectors of the population is quite limited, as it becomes evident in Guadalupe's case. When asked about how she felt about her bodily changes when starting to become a woman, she said:

> "…Yes, like when, for example, I started to menstruate ["*reglar*"] and all that. The first time I did get frightened and I didn't say anything to my mother. I was alone … I was ashamed to tell my mother … I didn't know what had happened to me. Well yes, I listened others talk (about it) and all that … about menarque ["*de la regla*"] and all that, but they had never talked directly like that with me and told me "You know what? This happens to you at such and such an age … It is like this…", or something like that."

When asked whether she and Pedro thought that they could get pregnant after engaging in sexual relations, she said: "Well yes, … but we didn't think it would be so fast".

With respect to how she realised that she was pregnant, she mentioned that her mother had taken her to the doctor, because she had much nausea. The doctor said it was gastritis and gave her lots of drugs, and she said she had to take them, because she didn't know she was pregnant. It was only a month later that she realised she was pregnant, because she didn't menstruate.

In the narrative there is no mention at all about contraceptives. Although no specific questions were asked about them, it is quite evident that their use was probably out of the conscious options available to Guadalupe and Pedro before the pregnancy.

Early pregnancies in social contexts like Hornos are fairly frequent, as mentioned before and illustrated in Figure 1.[11] Guadalupe got pregnant at fourteen. Elisa, another of the girls from this context who we also interviewed, got pregnant at seventeen. Both experimented dramatic events during their childhood or early adolescence. Elisa grew

11. If we assume that most households in Hornos belong to the "very low" socioeconomic stratum, we can assume that approximately one fifth of young women 15-19 years old become pregnant (see Figure 1).

up without her parents and lived with various foster parents at different times; Guadalupe suffered the temporary disappearance of her father when she was fourteen. Both reached little formal education; Elisa because she had to work and thought that more schooling would not help her for that; Guadalupe apparently because she did not feel capable of continuing, after having missed school as a consequence of the temporary disappearance of her father.

As we will see later on, some of these circumstances might appear as merely conjunctural, but they take place in an underlying social context which characteristics tend to convert them into significant antecedents for early pregnancies.

5.1.2. The urban "popular" context

In contrast with the marginal communities, urban popular sector settlements, which in Mexican large cities encompass the greatest percentage of the population, count with most urban and sanitary services (sewage, running water, schools, health clinics, police, parks and sports grounds); houses are more sturdy; families tend to own various household appliances such as a vacuum cleaner, a laundry machine, etc.; some families own an automobile; strong value tends to be placed in the family. Parents often completed their primary education, their children usually complete secondary school, some continue into preparatory school and a few carry on to the university. Many girls work before marriage and most marry in their early twenties.

The Colonia Mariano Matamoros, in the capital of the State of Tamaulipas, which we chose as the urban-popular social context to be taken for this article, had approximately 5,000 inhabitants. It is located on the border with the United States of America and was built mostly in the 1960's, for the settlement of primary and secondary school teachers. The Colonia has its own park, community centre and sports grounds. Employment, particularly for women, expanded significantly in the 1960's and 1970's through the *"maquiladoras"* (assembly factories for export). There is also some employment for both men and women across the border. Given the opportunities existing for them in border cities such as Matamoros, young girls aspire to work in a *"maquiladora"* for some years, in order to have their own money for buying clothes and beauty products, and then marry and have children.

Natalia is the young woman we have chosen in order to illustrate one of the situations we consider quite typical of girls who get pregnant early in their lives in this kind of social contexts. She lives with her father and mother and has three elder brothers. Natalia is nineteen years old, has a three-month-old daughter, and presently lives with her husband in her parents' house.

Living conditions

Natalia's father is a mason. He was born in another State and came to live in Matamoros with his family while still a child. Her mother was born in an *"ejido"* (communal land). They probably have little formal education. They have lived in the Colonia Mariano Matamoros since their childhood. Before Natalia was born they bought the lot where they live.

> "…it was a wooden house, water got in everywhere when it rained … They first built that room over there … […] Yes, a bedroom with a water-closet and there we lived, my three brothers. ... [B]efore the bathroom was at the end, with boards … […] Then they started to build these two large bedrooms and they continued building little by little. […] [F]or my fifteenth birthday I was going to have my own bedroom and I have never had it."

Natalia's father has built the whole house with the help of one of her brothers, who is also a mason. Both of Natalia's parents have worked intermittently over the years.

There has been a tense situation between her parents for some time. Her father drinks and is jealous because his wife works outside home. He thinks that she is unfaithful, like he once was. In her narrative Natalia admits that her mother is probably unfaithful, and that makes her feel very uneasy towards her and disconcerted about the whole situation.

> "…my father was very jealous with my mother … I really don't know why; my mother has always worked on the street, that is, not on the street [she laughs], I mean taking food to the factories; that is, she doesn't like to be here [in the house]; until later on when she put the telephone business here in the house [she sells cell phones]. But presently she has to go out in order to get more telephones and … she has to sell them and bring more, but my father doesn't agree with her. The moment he doesn't agree he starts drinking and then … the fight in the night."

Schooling and aspirations

Natalia finished preparatory school and became pregnant shortly after that. She apparently did not have strong aspirations to go on studying. Before finishing preparatory school she was looking for a job.

> Interviewer. "And then I remember that you were looking for a job when you came out [of preparatory school], true? Because [it was] at that time that I met you."
> Natalia. "Yes … well … I was wanting to look for a job for when I'd come out of prep-school, but my mother told me to study a profession ["*carrera*"], but I told her I better wait, because I didn't know what to study; and well, that's when I became pregnant and neither studied nor worked…"

Natalia held jobs at two assembly plants before, once when she was fifteen and beginning prep-school, and then at the beginning of her third year of prep-school. Both times she left her job after a relatively short period, because they changed her shift at the plant, and combining work and studies became too cumbersome. She did not work because she had to, but because she wanted to earn some money to buy her clothes with her own earnings.

> "…it was very heavy [to both work and study] and … well … my mother told me that I didn't have the obligation to work … […]"
> Interviewer. "Tell me, before starting to work, whose idea was it?"
> Natalia. "My girl-friend's and mine. We had … how do you say it … [she probably meant the impulse] to work, to earn at least [enough] to buy clothes for ourselves…"

At one point in the interview Natalia implies that she did want to go on studying after prep-school; however, she also reiterates her aspiration to work and make money.

> "And I did get into [her second job] but they sent me to the third shift and … well … yes it became difficult because of the school, and since I did want to finish at least prep-school; that is … I did intend to study ["*pensaba estudiar*"], no? But since I then got pregnant well I couldn't study."
> Interviewer. "And what did you intend to study?"
> Natalia. "Well, Psychology; it was my … well yes, I wanted to study Psychology, it's what I like best."

The general impression one gets from her narrative is that Natalia did not have any clear and strong aspirations to go on studying after

finishing prep-school. What she aspired to was to work, earn money, and to marry.

Sexuality, contraception, pregnancy, and childbirth

Natalia had several boyfriends while in secondary and preparatory school, but says it was very different when – at seventeen – she met, started to go out, and became the sweetheart of the young man who is now her husband, who very soon met her family and little by little gained their confidence.

She had her first sexual encounter with him in her house, after more than a year of going steady with him. Soon after that she became pregnant. Apparently she was not too worried about a possible pregnancy.

> "After all my parents found out that I was Miguel's girlfriend and ended up by accepting it; my mom, not so much my dad. Then, after that, they started to have confidence in him, and then he did come in; they let him come into the house and they let me go out more with him. […]"
> Interviewer. "And how did you come to have [sexual] relations?"
> Natalia. "It was something which came to be; we remained by ourselves [in her parents' house]; well, we had been sweethearts ["*novios*"] for more than a year, so we saw that ... there were times we even talked about getting married, but he hadn't finished preparatory school, and I had already finished but, well, I couldn't be selfish and not let him finish … But … we never imagined that I would come out becoming pregnant…"
> Interviewer. "Were you taking care of yourself?"
> Natalia. "No, he took care of himself … […]"
> Interviewer. "In what way [did he take care of himself]?"
> Natalia. "It was like … how do you call it? … Yes, that is, he withdrew the moment he was going to ejaculate. It was he who always took care; I never took care of myself, and it was the way I tell you, we never imagined that I would become…"
> Interviewer [interrupting her]. "That there would be a goal" [using the football allegory]
> Natalia. "Yes, that I would become pregnant. Yes … well … he never told me that he would never [she probably meant that he would not] be responsible [for getting her pregnant]. On the contrary, he always gave me encouragement and told me that we had to get on."

So Natalia confided in him; she thought *he* knew how to prevent a pregnancy, and she knew he "would respond" in case of a pregnancy.

They had planned to get married after he would finish preparatory school, but when Natalia got pregnant they went to live for a short period to the house of her partner's family and then to her parents' house, while he finished his education. They had a hard time, since her partner had to work while he continued studying; they hardly saw each other. Her husband finished his schooling, they got married after the baby was born, and at the time of the interview he was working in order to save money so they could move to a place of their own. She also plans to work as soon as possible.

The case of Natalia illustrates, from my point of view, one of the prototypical situations confronted by young girls in social contexts such as this one, where, as we could observe through our ethnographic work and group interviews, and as illustrated by the case of Natalia, girls tend to come from relatively poor families, where parents have relatively low educational levels and must work hard in order to just support their families. Youngsters with these origins have greater opportunities than their parents of reaching higher educational levels, and although a significant proportion of them aspire to obtain a university degree, most are out of school by the age of eighteen or nineteen. They wish to work, have some money of their own and, particularly in the case of girls, find a partner with whom to marry.

When these young women find an adequate partner, they tend to make their relationship formal, make their situation known to the respective families, and slowly gain the confidence of the girl's parents to grant them some independence – for example in order to go out with their fiancé without a chaperon –, a situation which propitiates greater opportunities for a sexual encounter.

Given the combination of: a) existing gender stereotypes in the Latin American culture (see Pantelides *et al.*, 1995 for Argentina); b) an element of mutual confidence in each other (which in this social context implies that he will take care in order to prevent a pregnancy and/or that he will "respond" – i.e. accept the responsibility and act in consequence – in case she does get pregnant) (see Stern *et al.*, 2001); and c) in many cases, lack of adequate information regarding sexuality and reproduction, it is not difficult for a pregnancy to take place.

These pregnancies do not seem to be very problematic in terms of the present and future of the couple involved: both youngsters have

finished or are on the verge of finishing the cycle of studies to which they aspired or which they can realistically reach; their aspirations did not involve postponing marriage and paternity for long; they were ready to get married rather sooner than later.

There is, of course, some turmoil in the families of both members of the couple when learning about the unexpected pregnancy, but they usually soon get the support of their respective parents, who were probably looking forward to their not too distant marriage. And there is also a period of stress in both members of the couple, who have to simultaneously learn to live together as a couple, confront the reactions of their parents, and also probably of their peers, as well as the emerging responsibilities of supporting and taking care of a child.

In other words, the consequences of such "adolescent" pregnancies – which in this sector tend to occur in late adolescence, at 18 or 19 (Stern and Menkes, in process) – involve the precipitation of events which would have come about anyway, and perhaps a short period of unanticipated pressures, but all in all they seem to represent relatively small matters compared with the consequences of other types of adolescent pregnancies, which might occur in circumstances which imply greater disruptions and changes in the course of the youngsters' lives.

5.1.3. The upper-middle class context

Upper-middle class sectors in Mexico constitute a small proportion (probably less than 10%) of the total population and, as we saw in Figure 1, adolescent pregnancies in this sector of the population tend to be fairly scarce.[12] The contrasts between their living standards and those of the rest of the population are tremendous. In large cities such as Mexico City they tend to live in well protected neighbourhoods, with security guards at the entrance and various servants – chauffeur, maids, gardner – who tend to make it practically impossible for an unknown to reach the family.[13]

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12. The great majority of households of the upper-middle class context we studied would probably belong to the "high" socioeconomic stratum, where, as can be seen in Figure 1, 3.5% of women aged 15 to 19 had ever been pregnant.

13. For our group and individual interviews we wanted to work in a territorially defined and delimited upper-middle class neighbourhood in the southern part of Mexico City, in which we had already done our ethnographic work, but had to renounce and work through contacting adolescents from these families in schools

Upper-middle class families tend to live in large – four-to-five bedroom – houses, with garden. They usually own a second week-end or vacation house, several recent-model automobiles, as well as TV sets, video-cassettes, computers, etc. Male adults own business enterprises, or work in the high echelons of large corporations or in high posts in the government. Many adult women also work, mostly part-time, as independent or salaried professionals, or in service activities of their own – travel agencies, art-schools, counselling, etc.

The period of adolescence, encompassing the teen-age years, is clearly recognized by this population. Practically all youngsters live at home and are in school during this period and most go on to university studies well beyond their twenties (one can say that they have a protracted adolescence, see footnote no. 9). They spend little time at home during the day. After school, many take artistic, cultural and/or sports classes. Socialization takes place mostly in school and in large commercial or other centres with all kinds of facilities – cinemas, cafés, restaurants, boutiques, to which adolescents are specifically drawn by consumer-industry artifices.

Given the scarce occurrence of adolescent pregnancies in this sector of the population (or at least of the acceptance of them), we could not find a young woman in this social context who had become pregnant during adolescence and who would collaborate in our study.[14] We do not consider this as a limitation of the study, however, given the objective of our overall project, which is aimed at reaching a better understanding of why these pregnancies tend to occur more frequently in some social sectors than in others, and of the meaning and implications which adolescent pregnancy have in each of them. Understanding why such pregnancies seem to occur so seldom in the upper-middle

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known to belong to this population sector, because we couldn't get access to families in their households.

14. It ought to be mentioned, however, that, though not illustrated by the four young women of this sector of the population whom we interviewed, there is currently a different kind of situation occurring in the more liberal sector of this social class, which in a certain sense is going through a "sexual revolution" similar to that which took place in the U.S. in the 1970's, and where pregnancies during adolescence are not as uncommon as it could be inferred from the cases presented. Apparently a growing proportion of young girls (15-17) have unprotected relations with their peers and become pregnant. Most of these pregnancies, however, are "dealt with" through abortions and remain private affairs.

sectors of the Mexican population can help understand, by contrast, why they happen more frequently in other sectors.

For the purpose of this paper, we have taken the case of Angélica as an example of the kinds of situations existing in this sector *vis-à-vis* the possibility of the occurrence of an early pregnancy and childbirth. Although the socio-economic level of wellbeing of her family is probably on the lower echelon of the upper-middle class, we have selected Angélica because, in contrast to the narratives of the other three young women interviewed, her narrative illustrates various experiences which might have led to situations of vulnerability and to an early pregnancy. The fact that they did not lead to such a pregnancy can serve to illustrate our arguments in terms of the relationship between poverty, social vulnerability, and adolescent pregnancy.

Angélica is twenty years old and lives in the house of her uncles and cousins in Mexico City, where she came from Oaxaca[15] three years before the interview in order to study at a private university.

Socioeconomic conditions and family background

Angélica's father came from humble social origins. One of many siblings, he was born in a small mountain-ridge mining town. Having become impressed as a child with the foreign engineers who came to hire working hands for the mines, he stubbornly pursued his aspiration to become an engineer, and managed to finish his university studies under very adverse economic conditions.

After working in a mine for a foreign enterprise, he became independent and started to exploit his own mines together with three partners. Apparently it was then that he made the money which allowed him to build the base to lead an affluent middle-class life with his wife and two young children, Angélica and her younger brother, in the capital city of Oaxaca.

But Angélica remembers quite vividly the two economic blows which made their life less affluent. When she was about eight years old her father's enterprise was apparently involved in a fraud, he was involved in large debts, and they had to adjust to a more modest lifestyle.

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15. Oaxaca is one of the poorest States of Mexico, located in the South, about 500 km from Mexico City. It has the greatest percentage of indigenous population in the country. The population of the capital city of the State is quite traditional and conservative in its values.

Then, when Angélica was 12 years old, she received the greatest blow of her life: her father, with whom she had a very close relationship, died in an automobile accident in which her little brother was also seriously injured. Angélica's mother, who had had a BA in pedagogy, had to work and they couldn't afford to pay for the private school where she was studying, so she moved to an aunt's school where they didn't have to pay.

In spite of these economic reversals, however, Angélica acknowledges implicitly and explicitly in various parts of her narrative that she grew up in a well-to-do family.

> "…my school was always one of the most expensive ones […]. I started to have economic problems before my father died, but … I didn't have a bad life; my mother had two cars … hm … obviously my father's and her's … hm … good cars. My family was one of the best known […] and they [her classmates] were of the families with money, you know, with beautiful and successful parents…"

Angélica felt abandoned when her father died and her mother started to work, although a woman friend of her mother's went frequently to stay with her and her brother while their mother was working. This woman became an important figure for Angélica; she also accompanied her to Mexico City to show her how to get around in the city.

> "When my father died, a friend of my mother, Clarita, who … I'd say must now be around thirty eight years old, came to be very close to us. Then … she … like if wanting to take the place of my mother … But I talk nowadays with her and she tells me: "Angélica, what happens is that you were very reserved, my daughter, I didn't even know how to lay hold of you, but you … you sometimes came and embraced me, and with that it was enough." And it is true; Clarita came to fill up, to a certain extent, the attention I was lacking from my mother."

Schooling and aspirations

Angélica has continued her schooling uninterruptedly and has always been among the first in her class. She never entertained any plans but to go to the university and become a professional. During her last semesters of prep-school she started making plans as to what and where to study. After actively looking for available options and considering the pros and cons of them, she decided to go to Mexico

City and study Literature at a private university. The following excerpts illustrate her strong and high aspirations:

> "[Talking about her relationship with León, who wanted to marry her]: But … he knew that I was coming here [to Mexico City] and I was not going to change my plans either because of him or anybody else, yes? I had it very clear that […] I had to get out of Oaxaca, no? And at first I wanted to study Law. […] I had the experience of having met many people in Europe and I wanted to know more. I didn't want to stay in a provincial hole, yes? I say, "I adore my city", but I was fed up with it … […] I said: "I don't want to end up like them [her classmates who were planning to stay in Oaxaca], I want … I want to be great, I want … I want to learn, to see", yes? […] I want … want to travel, I want to learn more, I want … I want to study a doctorate in … in Madrid, for example."

Sexuality and contraception

In her narrative, Angélica talks extensively and in great detail about her multiple friendships and relations with peers all along her schooling years. At various points in her life she has been exposed to what one can interpret as situations involving risks for her sexual and reproductive wellbeing. To give some examples:

As her fifteenth birthday present she got a 33-day trip to Europe. She went with a group of fifteen-year-old girls whom she had not met before. A few families with elder boys and adults were included in the group, since the organizers were not able to fill all the places with fifteen-year-old girls. Adult supervision was apparently very lax, and she got into various risky situations, some with elder youngsters native to the countries; another where a drunken man in the travelling party apparently was on the verge of sexually abusing her.

When she was 16 and in her first year of prep-school, she got into a spurt of partying out with boy- and girl-friends, where getting drunk and smoking pot were common, and which sometimes ended up by sleeping together in the house of one or another of her friends.

When she was seventeen, Angélica met León, a young man who was very different from the kind of friends with whom she commonly related and with whom she had experiences which astonished her and aroused her curiosity.

> "During fifth semester [first semester of the third year of preparatory school] I started to go out to gigs ["*tocadas*"] with some girlfriends

> and there I met a guy. My first guy … huh … and besides it was something like … wow, you know? He looked at me! Cause, I say, he was the vocalist of the band, he was a year older than me, and … was a misunderstood guy with hair down to here [pointing to her back, below her shoulders]; jeans half ragged, and … and he did drink, he did burn pot. And he took notice of me, you know? Wow! We started going out but nothing came out."

Angélica had her first sexual experience when she was 17. León convinced her to have sex before she came to Mexico City. She thought that in that way she would not put their relationship in doubt.

> "And there the problem with León started [when she was exploring options for her university studies]. He started to press me, to tell me that … that I was neglecting him very much, that we were a couple and […] it was then that he started to press me into having sexual relations, no? [He said] "Look, we are a couple and it is important that we are together … 'for ever and ever' [she uttered this phrase in English] […] The thing is that you're leaving, look…" and I don't know what. The fact is that at the end I consented so that he wouldn't press me any more."

She doesn't repent of having had sex, but thinks that she wasn't ready yet and that she couldn't negotiate. She was worried about the effectiveness of condoms, which handling she let up to León, and she was worried about the possibility of a pregnancy.

> "I always protected myself with León, you know? Always ... rigorous super condom. And there were quite some fights! "Ah … that I don't know what; … but you don't trust me! Look, I…" But I said, "fuck you. Ok, we had sex but … damn, I can't come out with any shit ["*con una mamada*"] because I'd kill my mother, you know? and that's the last thing I want." But it was horrible because … well, not horrible, I don't repent. Maybe I should have waited a bit more time, you know? But...it was … was very difficult for me to confront a … something really unknown for me."

When she came to Mexico City to study at the University she went through a period in which she wanted to live fully the liberty of living alone.

> "First semester. Second semester ... it was like that, like wow!, the full mess ["*destrampe*"]. I lived alone, only with my cousins, we didn't have any authorities, if I wished, I went to class, if I didn't want to, I didn't go to school. I started drinking here in Mexico, I went back … to drinking, and it was partying all week-ends, Friday and Saturday, hm

> … intoxicate myself to the end and have fun and meet people … and, what happened? I started to forget about León."

At the time of the interview Angélica already knew better how to take care of herself:

> "…now things are so different … yes? I will be twenty years old, am going out with a guy who is older than I am. A completely different kid. But … in the sexual aspect, it is no more that … that fear, yes? because … already … I know more things. For example, … I say, apart from the condom, yes?, the emergency pills. For example, now that I'll be going to Oaxaca, I'll go to my gynaecologist … so that he gives me, I don't know, a good method…"

Fear of an early pregnancy

Angélica felt that there would have been a strong moral condemnation on the part of her mother and also toward her family in the conservative context of Oaxaca if she had gotten pregnant, and furthermore, she would have had to truncate her plans to go to Mexico City to study.

> "When I started to go out with León one day my mother made me sit down and told me: "You know, Angélica, in this world -in this world, not even in Oaxaca-, in this world there are two kinds of women ... the partying type ["*reventadas*"] and the square type ["*apretadas*"]. The partying type are the best ["*más chiras*"], are the ones who have more friends, are the ones about which all the kids say: "wow, I want this partying out chick to be my sweetheart". But, you know – she said – the best girls are the ones they want to be their wives." […] And she said: "I want you to be a best girl ... and I don't care, and the day you come to me with some bullshit ["*una pendejada*"] – that's the way she said it –, with some bullshit, I'll feel very bad because I'll know that I was not a good mother and that I didn't educate you well … and, above all, I will feel very disappointed, because then you don't have any values, you didn't learn anything of what your father left to you or of what I am trying to leave to you. […] And the day you come and tell me 'I'm pregnant', or some bullshit, 'I'm going to live with someone', or 'I'm going to marry', or … you know what I mean, you will loose all my support. You are my daughter and I love you very much, but you'll have to take care of yourself and I don't care. […]"

At various points in her narrative she adds phrases that show the strength of her fears:

> "I said: "Darn! ["*¡Puta!*"], before coming with a shit ["*con una mamada*"], rigorous super condom. I don't want to spoil my life…" […] … and no, man ["*no'mbre*"], I started to worry a lot ["*¡me vino una preocupación!*"]; I said: "Darn ["*¡Puta!*"], I already fucked it up ["*ya la cagué*"], I'm going to have a baby ["*chilpayate*"]. I don't want to!" And no, man ["*no'mbre*"], I felt very badly ["*me puse muy mal*"]. […] … and now you can't imagine ["*y ahora no sabes*"], I truly felt the worst and I started … I thought: "Dude ["*güey*"], if there is a God […] something has to happen", yes?, and it was still fifteen days before it would come [her menstruation]. So it was a martyrdom; they were the worst fifteen days of my life. […] … I had many guilt feelings, remorse, and I said: "Darn! ["*Puta*"], look at her [her mother], so peaceful, reading, and look at your brother, and you're not well, and maybe you'll destroy their lives and destroy your own life." And the idea terrified me […] you don't know, it was … it was really suffering".

One of the elements which stand out in the four cases belonging to the upper-middle class which we studied is the great force exerted by the social environment in which the youngsters live, in terms of their finishing a university career and maintaining their social class status. Contrariwise to what happens in lower class contexts, in the upper-middle class there is a very high value placed on obtaining a university education. This was implied both in the group interview and in each of the case studies. In the group interview, for instance, the girls said in the context of the aspirations of girls of their own social context:

> "…first you think about your own fulfilment and then in being a mother." […] "Finish *your* [academic] career and … be able to support yourself." "…to be free and be independent; have a future for yourself…" […] "…they have the priority of practising their profession to a 100 percent."

It is not a coincidence, then, that the four girls we interviewed in this context (Virginia, 22, Laura, 21, Angélica, 20, and Cynthia, 18) are single and still studying, all of them at the university level. That is the case of most girls of this social class. None of them has gone through a pregnancy and apparently only one of them, Angélica, admits to having had sexual relationships.

5.2. Social vulnerability for early pregnancy and childbirth in the different contexts

Although in any social sector there can exist elements which can lead to unintended pregnancies and early births, there is a series of factors which tend to make this more probable in some sectors than in others. We will take the cases described in order to elaborate some tentative interpretations related to the links between poverty, social vulnerability and adolescent pregnancy.

In the case of Guadalupe, from the marginal context, we can see how an incident – the temporary disappearance of her father – destabilises her life and contributes to unchain a series of events which lead to an early childbearing. But we cannot stay with the incident in order to explain the early maternity of Guadalupe. For that we have to resort to elements of the social structure which characterise the context in which she lives and which underlies the events that have taken place and assist in their explanation. Let us see.

Firstly, Guadalupe finds herself compelled to accompany her mother to look for her father and, consequently, to neglect her school attendance.[16] That a young girl has to miss going to school during several weeks to accompany her mother is an indication, on the one hand, of the few means available to the mother for locating her husband – she has to physically go and look for him – and, on the other hand, of the fact that there was probably no one else at hand who could accompany her. In other words, there was no family, community, or social network available from which to obtain those resources.

If such social capital had been available, we can speculate, Guadalupe may have remained longer in school. The non-existence or feebleness of social networks is an element that contributes to the vulnerability in which these families find themselves.[17]

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16. Moreover, as indicated before, it is not the first time that she is compelled to neglect her studies: "When I went to primary [school] I missed my classes because I went to that thing about the land; they took me here and there. … since I'm the only child, my mother didn't have with whom to leave me, so I went with her to meetings, to marches ["*marchas*"] … to the point that when I was in fourth grade I flunked … they were already going to give us the land [for building their house], and I flunked…"

17. Although we must admit that there is controversy about the now extended belief about this feebleness of social networks in marginal social contexts. Larissa Adler (1975) argued strongly and quite convincingly in a very influential book pub-

Secondly, Guadalupe seems to have felt great proximity to her father, greater than that with her mother. We can infer that she received affection from her father. She doesn't mention other persons from which she might have received affection. At the disappearance of her father she is left with an emptiness which, we might speculate, leads her to relate more closely to the young man who makes her pregnant and with whom she ends up forming a union. The fact is that the disappearance of the father, with whom she had an affective relationship, and his poor health after he was brought back home, could have propitiated that she become involved with a young man who offered her affection during a period of affliction and lack of affection.

Though this might sound as pure psychological speculation, other studies (Román *et al.*, 2000) have shown that the expression of parental affection and communication tend to be scarce in poor, marginalised populations, due to various social elements, such as the precariousness of everyday life and the stress this imposes on parents, and that this is one of the elements contributing to the easiness with which young girls in these environments are led to accept intimate relationships with someone who offers them affection. (Compare this situation with that of Angélica, of the upper-middle class, when she lost her father and experienced the lack of attention of her mother due to her having to work outside home. She could count with a mother-substitute figure, Clarita, who in some way filled her need of affection.)

Thirdly, Guadalupe said that she didn't know anything about menstruation at the time of her menarque, and that she only realised that she was pregnant about a month after she had been taken to the doctor because of her intense nausea. Furthermore, in no instance does she refer to protective measures in front of a possible pregnancy. These elements are a clear indication of Guadalupe's ignorance of basic facts about sexuality, reproduction and contraception, which most probably reflects the conditions of most young girls in social contexts such as Hornos.[18]

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lished some decades ago, about the important role played by these networks in the subsistence of these communities. However, economic adjustment policies and the economic crisis which Mexico has experienced over most of the last twenty years, have apparently brought about important changes in social networks and in the role played by them in these types of communities (see González de la Rocha, 1994).

18. The testimony about the doctor's diagnosis with regard to her nausea (gastritis) without having asked for a pregnancy test speaks also about the social vulnerability existing in these sectors, where the quality of health services tends to be rather poor.

Fourthly, the elements narrated by Guadalupe regarding the lack of assistance she received from the authorities and teachers in her school to recuperate what she had lost during the period when she could not attend school, point to another element of social vulnerability existing in this context. They are an indication of the precariousness of schools and the low quality and little motivation of many of the teachers who work in social contexts of this kind in Mexico, in contrast to other social contexts, in which a temporary absence from school – for a justified reason – would not easily lead to a girl leaving school. As a matter of fact, one of the girls we interviewed for this study, a girl from the upper-middle class, had an accident which kept her out of school for several months but which did not impede her to finish that school-year and to continue studying. The family had a sufficient capacity of agency to negotiate with school authorities to that end. Witness also the case of Angélica, who not only had the personal help of Clarita for her ongoing studies, but also that of Clarita's teacher-friends to help her with Mathematics and Chemistry, in which she had difficulty during her high-school studies. Lack of these capacities in the case of Guadalupe is another indication of the social vulnerability existing in these social sectors.

Note that none of the elements mentioned would be sufficient by itself to offer an explanation of why Guadalupe became pregnant at an early age, but our argument is that the elements indicated, ***in their combination and as a whole***, do help us to understand why that pregnancy occurred. It is this which allows us to understand why early pregnancies are so much more frequent in these contexts than in others.

The particular circumstances which propitiate the occurrence of a specific early pregnancy can vary substantially – each story is unique –, but what deserves to be underlined is the fact that the reason why these pregnancies occur more or less frequently in a given social context is not related only to the individual life-histories, but with the social and family characteristics which underlie and condition them.

As implied before in this paper, we are not arguing for a deterministic point of view. Not all girls living in marginal social contexts get pregnant while being adolescents. What we are proposing is that certain characteristics of the sociocultural environment become translated into there being greater vulnerability for these pregnancies in some contexts than in others, in there being a greater propensity for the occurrence of early pregnancies. In other words, certain similar circum-

stantial facts – for example the death or disappearance of the father during a girls' adolescence – might or might not tend to contribute to an early pregnancy, depending upon some situational underlying characteristics. It is these characteristics as a whole – which in countries such as Mexico tend to be concentrated in contexts of poverty – which we denominate social vulnerability.

The case of Angélica, of the upper-middle class, can serve to illustrate this point. She suffers from a dramatic event in her early adolescence, the death of her father when she was twelve years old. Again, a circumstantial situation. This event, on the one hand, unbalances the family situation: her mother has to work and cannot devote her time to care for her children; she has to move them to another school because she cannot pay the cost of the school they are in, etc. On another hand, the event affects Angélica profoundly: she feels abandoned in view of the loss of her father and her mother's dedication to her work instead of attending her. But – and that is what is important to underline here –, the family counts with a family and extra-family network which makes it possible to surmount the situation and bring it to a new equilibrium: the mother's sister owns a school where Angélica and her brother can go as recipients of a "scholarship", that is, without paying; Angélica's mother has a friend, Clarita, who accepts taking care of the children and supervise them in the afternoons. Thanks to all this, Angélica can continue in school and, to a certain degree, she can surmount her feeling of abandonment through Clarita's closeness and affection.

In other words, we can see that in this social context, instead of there existing elements which propitiate parental neglect and the abandonment of school, as in the case of Guadalupe, there exists a social capital – family and extra-family networks – which allows to overcome conditions which in other contexts could have led to situations that would have propitiated an early pregnancy. Like in many other family histories, there are events and circumstances which could have translated into – or accentuated – elements of vulnerability for an early pregnancy, but one can see that in these cases there are elements which can be considered, following the conceptual scheme alluded to at the beginning of the paper, elements of social resilience, which make it possible to face the storm and mitigate its consequences.

Another example which allows one to contrast both cases is related to sexual education and knowledge about reproduction and contraception, as well as with aspirations and life perspectives. Angélica,

like many young women of the upper-middle class, has been exposed at various times in her adolescent and young adult life to social circumstances which have involved a high risk of having unprotected sexual relations. She was in such an atmosphere while on vacation in Europe when she was fifteen, then again in Oaxaca, when she became friend and then girlfriend of León, with whom she had sexual relations at seventeen. Then again in Mexico, during her first year at the university, when she lived alone and was involved in an environment of frequent wild parties in which she consumed alcohol and was exposed to having sexual relations. This notwithstanding, she has never become pregnant. She maintained that in her relationships with León they always used a preservative; there are elements in her narrative that suggest that she has had sexual relations subsequently and that she has also had them with protection. In middle-class sectors there is a much higher degree of conscientiousness about the risk of becoming pregnant, better information about the means to avoid it[19] and, moreover, there is a much greater motivation than in other sectors of the population to postpone maternity until well beyond the early twenties.

We can observe that, for one reason or another, most girls from the upper-middle class manage either not to initiate their sexual relations during adolescence, not to get pregnant when they are sexually active, or, at least, not to become mothers early in their lives.

The case of Natalia, from the popular sector, allows to illustrate another type of elements of social vulnerability which can exist in order for a pregnancy considered as "early" to occur. To be more precise, this case corresponds to what can be considered a premarital conception. Everything was directed so that Natalia would marry his boyfriend once he would have finished his preparatory school. Given the tradition and the social norm existing in these social sectors, she would have most surely become pregnant soon after the marriage, before becoming 20 years old or soon after that. However, the pregnancy occurs before marriage, unexpectedly, unplanned – "unwanted" according to the disputable sociodemographic terminology used in Mexico. What is it that leads to this pregnancy? According to our interpretation, basically the combination of three elements:

19. Angélica, for example, relates that at fourteen, while in second grade of secondary school, she participated in a research project about AIDS and contraceptive methods.

In the first place, the freedom enjoyed by Natalia to go out or to be left alone at home with her boyfriend, given the confidence granted by her parents – surely motivated because they saw the boyfriend as an adequate prospect to become their son-in-law;

Secondly, the absence of life-plans beyond marriage and maternity in Natalia. Had they existed, they could have led to postponing sexual relations or to more secure means to protect herself from a pregnancy;

And thirdly, the probable scarce knowledge about contraception on the part of the couple, which led them to trust a not so trustworthy method as withdrawal, although a relatively scarce preoccupation with a possible pregnancy could also have played a part here, given the existing marriage compromise.

If we could generalize the case of Natalia to the situation existing in this social sector, we could say that in the popular sector social vulnerability for the occurrence of unexpected adolescent pregnancies is located in the combination of: a) a lack of aspirations (or of realistic opportunities) beyond finishing preparatory school, the other face of which would be the high value placed on a relatively early marriage and maternity[20]; b) the relatively scarce and imprecise knowledge which young people in this social sector have about reproduction and contraception; and c) the element of trust which is established both between the members of the couple and between the parents of the girl and the couple once a steady relationship has progressed and there exists a certain marriage compromise.

6. Conclusion and discussion

An attempt has been made to show the promissing character of the concept of social vulnerability for understanding adolescent pregnancy and to illustrate how this social vulnerability is related to the relative poverty manifest in the three social contexts studied. Although there is certainly a need for greater conceptual clarification and analysis, I think the evidence presented shows, on the one hand, that poverty and social vulnerability, although related to each other, are not equivalent or synonymous and, on the other hand, that both are associated, to a considerable degree, to adolescent pregnancy.

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20. On the importance of aspirations, opportunity structures, and reproductive roles in the sexual behaviour of adolescents, see Nathanson and Becker, 1983.

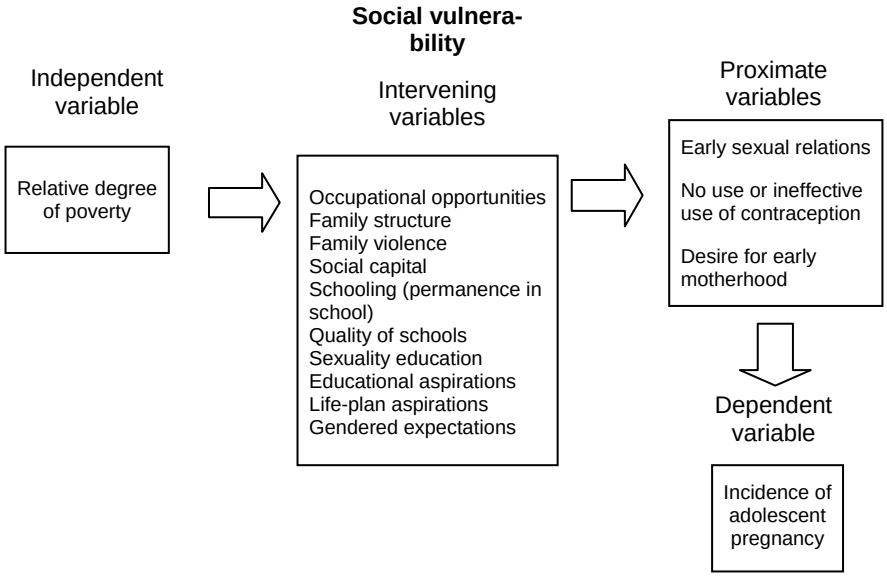
Some of the elements of social vulnerability identified in the analysis undertaken are the following:

- Precariousness of everyday life: lack of occupational opportunities and feebleness of means of subsistence.
- Destabilising events in family life.
- Feebleness of family and social networks: lack of social capital; lack of agency.
- Early school dropout (before finishing secondary school).
- Low involvement of teachers and school authorities in the educational development of students.
- Lack of sexuality education: ignorance of basic facts about reproduction and the risks of unprotected sexual behaviour.
- Low or limited educational aspirations (beyond the end of "adolescence").
- No personal life-plans beyond marriage and maternity.
- Gendered double-standards. Lack of dialogue with regard to sex and protective measures. Undefined and dubious meaning of "trust".

In terms of conceptual modelling, the first element can be identified with poverty and can be conceptualised as an independent variable, while the other elements, which we suggest to consider as elements of social vulnerability, could be conceptualised as intervening variables mediating between poverty and adolescent pregnancy. The well-known "proximate determinants" explaining fertility (Bongaarts, 1978) can also be introduced into the model, as derived from the social vulnerability intervening variables, as suggested in Figure 2.

The analysis made indicates that there are various levels of social vulnerability to early pregnancy and that the various elements or di mensions of this construct do not operate independently but through their interaction and accumulation. For instance, youngsters, and particularly young girls living in mono-parental families, or in families with conflicting relations or in which domestic violence is prevalent, are known to be more vulnerable to having early sex and to becoming pregnant than girls living with their father and mother under more harmonic relationships (see Hayes, 1987; Atkin *et al.,* 1996). But the degree of this vulnerability (as of many others) is, on the one hand, probably different between social strata – there are probably more mono-parental and dysfunctional families in the poorer strata than in

Figure 2
Toward a conceptual model of the propensity for the incidence of adolescent pregnancy in different population sectors



the middle classes – and, on the other, is compounded when added to the vulnerability implied by being poor in most countries.[21]

Some specific elements of the analysis undertaken which in my opinion deserve special mention are the following:

- The protective factor of remaining in school throughout the period of adolescence (see Stupp and Cáceres, 2001, for Costa Rica) and of having aspirations for life which include and give importance to elements other than being a wife and a mother.[22]

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21. The question of whether or to what extent "vulnerabilities" pertaining to families or to individuals are social is an open and perhaps and empirical question. Are dysfunctional families or girls with low esteem – both known as "variables" related to the "risk" of early pregnancies – evenly or hazardly distributed among the various strata of the population, or are they disproportionately concentrated in the poorer sectors?

22. In Mexico the great majority of adolescent pregnancies occur after girls have left school (Menkes *et al.*, 2004, p. 121), and studies show great differences in the prevalence of adolescent pregnancy between girls who are in school and those who

- The apparent great importance of stable and trustworthy support nets in determining the greater or lesser vulnerability of young girls to becoming pregnant early in their lives. Alcoholism, death or abandonment of a parent, family violence, migration (estrangement from original social nets) seem to be frequent, probably more so in contexts of extreme poverty, but also in less poor social contexts. The existence of family and community support nets which can help surmount the difficulties encountered by young girls undergoing these problems seems to be very important. In the absence of community or State supports, there is probably a greater propensity to the deterioration or rupture of these nets, particularly in contexts of extreme poverty (see Filgueira, 2001, p. 35-41).
- The incidence of domestic violence and abuse is a factor which drives many young girls to distance themselves from their parents or to get away from home, placing them in a situation of vulnerability (see Román, 2000).
- The apparent importance of the element of "confidence" (in the partner) in leading to unprotected sexual relations. This element extends also to the "confidence" of the girls' parents in her "right" behaviour and the "confidence" they have in the partner when they know who he is, which tend to propitiate the sexual involvement of the girl with her partner (see Román, 2000, Ch. V).
- The scarce knowledge among adolescents about their body, reproductive biology, sexuality, and adequate use of contraceptive methods (Menkes and Suárez, 2003; for a more general appraisal, see Blanc and Way, 1998).

Apparently these factors operate across social classes, although in different degrees and qualitatively different ways.

7. Policy implications

The implications of these results in terms of policy, interventions and services for adolescents deserve a detailed analysis which lies beyond the purpose and possibilities of this paper, but for which we can draw some preliminary outlines. Some other reflections regarding poli-

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are not in school (see INSAD, 2002, p. 26), which is probably true even maintaining constant their socioeconomic level.

cies and programs directed to prevent unwanted early pregnancies and delaying childbirth can be made taking into account both our results and other existing recommendations.

Towards a more comprehensive approach

The question of adolescent pregnancy needs to be analysed within its more encompassing parameters, such as the demographic transition, social inequality and poverty, the political and ideological environment, and ongoing processes of social and cultural change, in order to have a realistic understanding of both the reasons (causes, determinants) for it, its possible consequences, and the limits of possible interventions.

Adapting policies and interventions

The needs of adolescents in terms of their sexual and reproductive health, as well as the possibilities for interventions which can realistically bring changes in the desired directions – for instance, in preventing unwanted pregnancies or delaying childbirth – vary substantially for different groups of the population. The implication of this is that policies and programs ought to be designed taking into account these different needs and possibilities.[23]

Actions to diminish conditions of social vulnerability

There is little doubt that in countries such as Mexico poverty breeds much of existing adolescent pregnancies. But it has been proven very difficult, if not impossible, to eradicate poverty and, under present world conditions, even to diminish its degree and extension. If perhaps little can be done in terms of decreasing poverty itself, what can be done in order to ameliorate some of the vulnerabilities associated with early pregnancies? What recommendations can we make based on the results of the preliminary analysis we have made here?

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23. This does not mean that specific policies and programs should be designed for each group of the population – which would be impossible and would run counter to the generality implied, by definition, by social policies –, but it does imply that the emphasis of certain policies, when applied to specific groups, should be different, and that the selection of programs to be applied should be made in terms of the actual needs and possibilities of each group. In other words, while policies and programs can be general, the mixture of policies and programs applied to each group would have to be different.

One immediate recommendation would be to help families keep girls in school as long as possible, which implies not only offering free schooling at all levels for youngsters who cannot afford to pay, but also to give economic support to poor families so that their children can continue in school and do not have to work in order to contribute to the family subsistence.[24]

Another recommendation would be to stimulate and support the organization of collective activities for young girls, particularly for out-of-school girls, combining vocational training, income generating activities, and sexual and reproductive counselling. Aside from offering young girls a space for meeting and exchanging their thoughts, preoccupations, etc., with other girls (something of which they are usually excluded in poor communities), this would enhance the realisation and actualisation of aspirations other than early maternity as well as the means to achieve them (see Mensch *et al.*, 1998; Kirby, 2001).[25]

A third recommendation would be to establish a universal social security emergency subsidy for families which undergo catastrophic events in which their very subsistence is put at risk, including the sudden death or disability of the breadwinner, independently of his or her employment condition.[26]

A fourth suggestion would be to entertain the possibility of instituting some kind of basic support or social security for adolescents of poor families themselves, since the assumed premise that they depend on their parents for the continuation of their studies, amongst other aspects, is oftentimes untrue.

Some other reflections regarding policies and programs directed to prevent unwanted early pregnancies and delaying childbirth can be made taking into account both our results and other existing recommendations.

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24. An obvious complementary recommendation would be to improve the contents of gender, sexuality and reproductive health education being given in primary and secondary school and, particularly, the training of teachers for that purpose.

25. Health clinics do not seem to be an effective means to provide sexuality and family planning information to single adolescents, who usually do not attend these clinics unless they are already pregnant (see Stern and Reartes, 2001).

26. Such a subsidy was proposed by the present Minister of Health of the Mexican Government and was recently approved by the Congress as part of a basic health social security program for the poor ("Seguro Popular").

Greater emphasis in cultural factors as a part of policy and interventions

At a different level, but very importantly although I didn't have the space to stress the point in the specific analysis here undertaken, there are two underlying cultural factors which in my view are hindering in many different ways the possibilities for preventing unwanted early pregnancies, particularly in the not-so-poor sectors of the population: the non-acceptance of premarital sexual relations (or the non-acceptance of their possible occurrence even when the aim is to prevent them), and the wide gender inequalities which still pervade in Mexican society, particularly in the sphere of heterosexual relations (double standards for males and for females, sexual coercion and abuse, etc.).

The best way to deal with these factors, in my opinion, is through influencing mass communication media, by enhancing, supporting, and implementing programs which, with due respect to the various beliefs and moral norms of different sectors of the population, push in a direction of a more realistic openness to questions related to the sexuality of adolescents, and for a more respectful and supportive attitude towards their rights in this sphere of behaviour, so that all sectors of society can little by little contribute to the cultural change needed in order to be able to really help our youngsters to prevent unwanted early pregnancies and births. Mexican society is moving in that direction, although the renewed force of conservative forces ought to be taken into consideration, but much could be done in order to improve the situation (see Stern, 2001).

8. Suggestions for further research

In my opinion, many of the considerations made above deserve further research. We need to clarify the concept of social vulnerability as well as its dimensions or components. There is also a need to explore more systematically the relationships between poverty, social vulnerability and adolescent pregnancy at a conceptual and theoretical level.

On a more empirical level, one could think of both re-analysing existing studies of determinants of adolescent pregnancy looking for social vulnerability as here described, and of engaging in qualitative studies specifically designed for that purpose, preferably comparing

different groups of a population in terms of their relative poverty or social standing.

In terms of exploring some of these relationships quantitatively, some of the elements of social vulnerability that can be inferred from the description and analysis presented above, for which measurable indicators could be sought in existing surveys, and which could be used for modelling and for quantitative analyses are the following:

Family structure and context

As mentioned before, it is well known in the literature about adolescent pregnancy that youngsters who live in a context of monoparental families or of highly conflicting parental relationships are more prone to become pregnant than those who live in complete and non-conflicting family environments. Various factors might operate in such situations, such as: lack of attention and/or affection; lesser capability of supervision; etc. Indicators which can be used include: living with or without father and mother, separation or divorce of parents, or death of father or mother, during childhood or adolescence; existence or degree of family violence, both between the parents and between each parent and their children; as well as degree and quality of communication between parents and between the youngster and her mother and father. Another indicator, either by itself or in combination with some of the afore-mentioned ones might be the number of siblings, which might also be related to the capability of giving affection and attention to each child.

Social security

In Mexico roughly 50% of the population is covered by one of the systems of social security, which include access to medical services; pensions for temporary or permanent incapacity and for old age and retirement; maternity leave; as well as access to many other social services and amenities, including in most cases sports grounds, cultural and educational activities.[27] Being or not covered by one of these systems could be an indicator of social vulnerability.

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27. The two more important social security systems are the IMSS (Instituto Mexicano del Seguro Social), for workers of the private sector, and the ISSSTE (Instituto de Seguridad y Servicios Sociales para los Trabajadores del Estado), for workers of the public sector. The Armed Forces and the National Petroleum Company (PEMEX) have separate systems.

Educational and occupational opportunities

Many women, particularly in rural, marginal, and popular sectors, have very few opportunities in life but to be wives and mothers. They have few opportunities to remain in school beyond primary education and, except for domestic and family work, either in their own houses or in those of others, they have very few employment opportunities. In such cases, early maternity is practically the only option available and functions as a passage to social recognition and to adulthood. Indicators of this situation of vulnerability would be: at the individual level, level of education and aspirations (maternity versus education, occupation, etc.); at the collective or community level, occupations held by women of a determined stratum or social class can serve as an indicator of opportunities available for a girl belonging to that stratum. A comparison between (individual but socially constructed) educational and occupational aspirations or expectations and existing occupational opportunities would be important (see Nathanson and Becker, 1983, for measuring opportunity structures and reproductive roles).

Ignorance about reproduction

Ignoring basic facts about sexuality and reproduction makes young women vulnerable to an early pregnancy. Some surveys include questions about knowledge related to these issues, although they are usually insufficient to gauge the degree of this knowledge and even less the degree of awareness of risks or consequences. If no direct information is available on knowledge about these matters, level of education can serve as a proxy. Since issues about reproduction, sexuality, and gender relations are only brought into the school curriculum in secondary school[28], having or not completed that level of education can be used as an indicator. Another indicator would be access to family planning or reproductive health services. Since most surveys do not include information as specific as this, information regarding the use of medical services in general – in which information on reproduction and contraception are often provided – could also be used.

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28. An introduction to basic biological facts about reproduction is included in 5th and 6th grade of primary school, but studies have shown that the information thus provided is of little practical use for adolescents in terms of preparing them for safe sex.

Gender power

Unequal power relations between males and females is another factor which might translate into vulnerability to early pregnancy. Cultural definitions of gendered behaviour (how a girl is supposed to behave *vis-à-vis* boys, etc.) going from the degree to which a double morality is ascribed to the genders in each social group, to the degree of gender violence, and of sexual coercion and abuse existing in each of them, are possible dimensions of this factor (see Geldstein and Pantelides, 2001b).

Better qualitative and quantitative information about these questions is urgently needed to inform policies and interventions. As I have stated elsewhere (see Stern, 1995a, 1997, 1998) and as it is implied in this paper, most existing policy and programs aimed at improving the information which adolescents have of matters related to reproduction and prevention, and/or their access to contraceptive methods, fall incredibly short in terms of the needs of the different sectors of the population to postpone childbirth or to prevent unwanted pregnancies. I hope that this paper contributes to making this clear and to our collective reflection about possible means for improving the sexual and reproductive health of our youngsters.

References

ADLER, L. (1975), *Cómo sobreviven los marginados*. México, Siglo veintiuno editores, 1st ed.

ATKIN, L., N. EHRENFELD, and S. PICK (1996), "Sexualidad y fecundidad adolescente", in: A. Langer and K. Tolbert, eds., *Mujer: Sexualidad y Salud Reproductiva en México*, Edamex, Mexico, The Population Council.

BLANC, A., and A. WAY (1998), "Sexual behavior and contraceptive knowledge and use among adolescents in developing countries", *Studies in Family Planning*, vol. 29, no. 2, June, p. 106-116.

BOLTVINIK, J. (1994), *Pobreza y estratificación social en México*, Aguascalientes (Mexico), Instituto Nacional de Estadísitica, Geografía e Informática.

BOLTVINIK, J. (2001), "Dinámica y características de la pobreza en México", in: G. Gómez de León and C. Rabell, eds., *La población de México. Tendencias y perspectivas sociodemográficas hacia el siglo XXI,* Mexico City, Consejo Nacional de Población and Fondo de Cultura Económica, p. 950-998.

BONGAARTS, J. (1978), "A framework for analyzing the proximate determinants of fertility", *Population and Development Review*, vol. 4, no. 1, p. 105-132.

BONGAARTS, J., and B. COHEN, eds. (1998), "Adolescent Reproductive Behavior in the Developing World", *Studies in Family Planning*, vol. 29, no. 2, June.

CONAPO (2000), *Situación actual de los y las jóvenes en México. Diagnóstico sociodemográfico,* Mexico, Consejo Nacional de Población.

CORTÉS, F. (2001), "Distribución del ingreso y población en el México contemporáneo", in: G. Gómez de León and C. Rabell, eds., *La población de México. Tendencias y perspectivas sociodemográficas hacia el siglo XXI,* Mexico, Consejo Nacional de Población and Fondo de Cultura Económica, p. 924-948.

CORTÉS, F., *et al.* (2002), *Evolución y características de la pobreza en México en la última década del siglo XX*, Mexico, Secretaría de Desarrollo Social. Serie "Documentos de investigación".

DELOR, F., and M. HUBERT (2000), "Revisiting the concept of 'vulnerability'", *Social Science and Medicine*, vol. 50, p. 1557-1570.

ENADID (1997), *Encuesta Nacional de la Dinámica Demográfica*, Mexico, Instituto Nacional de Estadística, Geografía e Informática.

FEIXA, C. (1998), *El reloj de arena. Culturas juveniles en México,* Mexico, Causa Joven, Centro de Investigación y Estudios sobre Juventud.

FILGUEIRA, C. (1998), "Welfare and citizenship: Old and new vulnerabilities", in: Victor E. Tokman and Guillermo O'Donnell, eds., *Poverty and Inequality in Latin America. Issues and New Challenges*, Notre Dame, Indiana, USA, University of Notre Dame Press.

FILGUEIRA, C. (2001), *La actualidad de viejas temáticas: sobre los estudios de clase, estratificación y movilidad social en América Latina*, Cepal, División de Desarrollo Social, Santiago de Chile.

FORD, J. (2002), "Vulnerability: Concepts and issues", University of Guelph, on-line: www.uoguelph.ca/~jford/Vulnerability/FinalPaper.pdf

GELDSTEIN, R., and E. PANTELIDES (2001a), *Riesgo Reproductivo en la Adolescencia. Desigualdad Social y Asimetría de Género*, UNICEF, Argentine, Cuadernos del UNICEF.

GELDSTEIN, R., and E. PANTELIDES (2001b), *La iniciación sexual bajo coerción en el Area Metropolitana de Buenos Aires*, Centro de Estudios de Población, Buenos Aires, Argentine, Documento de Trabajo no. 2.

GERONIMUS, A. (1987), "On teenage childbearing and neonatal mortality in the United States", *Population and Development Review*, vol. 13, no. 2.

GERONIMUS, A. (1991), "Teenage childbearing and social and reproductive disadvantage: The evolution of complex questions and the demise of simple answers", *Family Relations*, vol. 40, p. 463-471.

GERONIMUS, A. (1992), "The weathering hypothesis and the health of African-American women and infants: Evidence and speculations", *Ethnicity and Disease*, vol. 2, no. 3 (Summer), p. 207-221.

GERONIMUS, A., and S. KORENMAN (1992), "The socio-economic consequences of teen childbearing reconsidered", *The Quarterly Journal of Economics*, vol. 107, no. 4, p. 1187-1214.

GERONIMUS, A., and S. KORENMAN (1993a), "Maternal youth or family background? On the health Disadvantages of infants with teenage mothers", *American Journal of Epidemiology*, vol. 137, no. 2, p. 213-225.

GERONIMUS, A., and S. KORENMAN (1993b), "The socioeconomic costs of teenage chilbearing: Evidence and interpretation", *Demography*, vol. 30, no. 2, p. 281-290.

GONZÁLEZ DE LA ROCHA, M. (1994), *The Resources of Poverty. Women and Survival in a Mexican City*, Blackwell, Cambridge, Mass., USA.

GUZMÁN, J., *et al.* (2001), *Diagnóstico sobre salud sexual y reproductiva de adolescentes en América Latina y el Caribe*, Fondo de Población de las Naciones Unidas, UNFPA, Mexico.

HAYES, Ch., ed. (1987), *Risking the Future. Adolescent Sexuality, Pregnancy, and Childbearing*, National Academy Press, Washington, D.C.

INSAD (2002), *Informe de la Encuesta Gente Joven, para la Fundación Mexicana para la Planeación Familiar*, A. C. Mexico Investigación en Salud y Demografía, S. C. INSAD, unpublished report.

IRVINE, J. (1994), "Cultural differences and adolescent sexualities", in: J. Irvine, ed., *Sexual Cultures and the Construction of Adolescent Sexualities*, Philadelphia, Temple University Press, p. 3-28.

KIRBY, Douglas (2001), *Emerging Answers. Research Findings on Programs to Reduce Teen Pregnancy*, The National Campaign to Prevent Teen Pregnancy, Washington, D.C.

KOTLIARENKO, M. A., I. CÁCERES, and M. FONTECILLA (1997), *Estado de Arte en Resiliencia*, Organización Panamericana de la Salud, Washington, D.C.

LUKER, K. (1996), *Dubious Conceptions. The Politics of Teenage Pregnancy*, Harvard University Press, Cambridge, Mass., USA.

MENKES, C., and L. SUÁREZ, L. (2002), "Determinants of pregnancy rates for adolescents in Mexico", Paper presented at the seventy-third annual meeting of the Pacific Sociological Association, Vancouver, British Columbia, Canada, April 18-21.

MENKES, C., and L. SUÁREZ (2003), "Educación sexual, conocimiento sobre la biología de la reproducción y funcionamiento de métodos anticonceptivos en Guanajuato", Paper presented at the VII Reunión Nacional de Investigación Demográfica, Guadalajara, Jalisco, Mexico.

MENKES, C., L. SUÁREZ, and L. NÚÑEZ (2004), "Embarazo y fecundidad adolescente en México", in: A. Lozano, ed., *El amanecer del siglo y la población mexicana*, vol. 1, Cuernavaca, Morelos, Mexico, Centro Regional de Investigaciones Multidisciplinarias/UNAM and Sociedad Mexicana de Demografía.

MENSCH, B., J. BRUCE, and M. E. GREENE (1998), *The Uncharted Passage. Girls' Adolescence in the Developing World*, Population Council, New York.

NATHANSON, C. (1991), *Dangerous Passage. The Social Control of Sexuality in Women's Adolescence*, Temple University Press, Philadelphia, USA.

NATHANSON, C., and M. BECKER (1983), "Aspirations, opportunity structures, and reproductive roles as determinants of contraceptive behaviour among adolescent girls", Paper presented at the annual meeting of the Population Association of America.

NAUHARDT, M. (1997), "Construcciones y representaciones. El péndulo social en la construcción de la juventud", *Jóvenes. Revista de Estudios sobre Juventud*, vol. 1, no. 3, p. 36-47.

NÚÑEZ, L. (2002), *Incidencia, diferenciales y actitudes del aborto en México*, MA dissertation in demography, El Colegio de México.

OPS (1988), *Fecundidad en la Adolescencia. Causas, Riesgos y Opciones*, Organización Panamericana de la Salud. Washington, D.C., Cuaderno Técnico no. 12.

OPS (1999), *Adolescencia al Día. Resiliencia*, Washington, D.C., Organización Panamericana de la Salud, Programa de Salud y Desarrollo del Adolescente, Reproducción de documentos, vol. I.

PANTELIDES, E., R. GELDSTEIN, and D. G. INFESTA (1995), *Imágenes de Género y Conducta Reproductiva en la Adolescencia*, Centro de Estudios de Población, Buenos Aires, Argentine.

PIZARRO, R. (2001), "La vulnerabilidad social y sus desafíos: una mirada desde América Latina", *Estudios estadísticos y prospectivos*, CEPAL, ECLAC, Santiago de Chile; on-line: www.eclac.cl/publicaciones/

POPPER, K. (1992), *Un mundo de propensiones*, Tecnos, Madrid.

POPULATION REPORTS (1995), *Meeting the Needs of Young Adults*, vol. 23, no. 3.

POPULATION REPORTS (2001), "¿Por qué tan vulnerables?", in: *Los jóvenes y el VIH/SIDA. ¿Podemos evitar una catástrofe?*, vol. 29, no. 3, p. 9-15.

RIEMANN, G., and F. SCHÜTZE (1991), "'Trajectory' as a basic theoretical concept for analysing suffering and disorderly social processes", in: David R. Maines, ed., *Social Organization and Social Process. Essays in Honor of Anselm Strauss*, Hawthorne, N.Y., Aldine de Gruyter, p. 333-357.

ROMÁN, R. (2000), *Del primer vals al primer bebé. Vivencias del embarazo en las jóvenes*, Mexico, Instituto Mexicano de la Juventud, p. 105-145.

ROMÁN, R., M. E. CARRASCO, E. VALDEZ, and M. J. CUBILLAS (2000), "Noviazgo y embarazo: una mirada a las trayectorias de amor y conflicto en mujeres adolescentes embarazadas", in: C. Stern and C. Echarri, eds., *Salud reproductiva y sociedad. Resultados de investigación*, Mexico, El Colegio de México.

RUBALCAVA, R. (2002), "Localidades y hogares en un mundo de propensiones", in: *Argumentos*, Universidad Autónoma Metropolitana, Xochimilco, Mexico.

SAFE PASSAGES TO ADULTHOOD (2001), *Dynamic Contextual Analysis of Young People's Sexual Health*, Faculty of Social Sciences, University of Southampton, U.K.

SELMAN, P. (2002), "El embarazo en la adolescencia, la pobreza y el debate de la seguridad social en Europa y los Estados Unidos", in: C. Rabell and M. E. Zavala de Cosío, eds., *La Fecundidad en Condiciones de Pobreza: Una Visión Internacional*, Mexico, Instituto de Investigaciones Sociales, UNAM, p. 315-341.

SILBER, T., A. GIURGIOVICH, and M. MUNIST (1995), "El embarazo en la adolescencia", in: M. Maddaleno *et al.*, eds., *La Salud del Adolescente y del Joven*, Organización Panamericana de la Salud, Washington, D.C., Publicación Científica no. 552.

SINGH, S., *et al.* (2001), "Socioeconomic disadvantage and adolescent women's sexual and reproductive behavior: The case of five developed countries", *Family Planning Perspectives*, vol. 33, no. 6, Nov./Dec.

STERN, C. (1995a), "La protección de la salud reproductiva de nuestros jóvenes requiere de políticas innovadoras y decididas", *Carta sobre Población*, vol. 1, no. 3, p. 1-6 [Mexico, Grupo Académico de Apoyo a Programas de Población].

STERN, C. (1995b), "Embarazo adolescente. Significado e implicaciones para diferentes sectores sociales", *Demos. Carta demográfica sobre México*, no. 8, p. 11-12.

STERN, C. (1997), "El embarazo en la adolescencia como problema público: Una visión crítica", *Salud Pública de México*, vol. 39, no. 2, p. 137-143.

STERN, C. (1998), "Embarazo en la adolescencia: El problema y las políticas para afrontarlo", in: COMEXANI (Colectivo Mexicano de Apoyo a la Niñez), *Los hechos se burlan de los derechos*, IV Informe sobre los derechos y la situación de la infancia en México, 1994-1997, Mexico, D.F., p. 79-89.

STERN, C. (2001), "Los jóvenes, la sexualidad y los embarazos tempranos", in: M. de Maria y Campos and G. Sánchez, eds., *¿Estamos unidos Mexicanos? Los límites de la cohesión social en México*, Informe de la Sección Mexicana del Club de Roma, Mexico, Editorial Planeta, p. 297-319.

STERN, C. (2003), "Significado e implicaciones del embarazo adolescente en distintos contextos socioculturales de México: reseña de un proyecto en proceso", *Estudios Sociológicos*, vol. 21, no. 63, p. 725-745.

STERN, C., and E. GARCÍA (2001), "Hacia un nuevo enfoque en el campo del embarazo adolescente", in: C. Stern and J. G. Figueroa, eds., *Sexualidad y salud reproductiva. Avances y retos para la investigación*, Mexico, El Colegio de México, p. 331-358.

STERN, C., and C. MENKES (in process), *Estratificación social y embarazo adolescente*.

STERN, C., and D. REARTES (2001), "Estudio de caso. Programas de salud reproductiva para adolescentes en México, D.F.", in: M. Gogna, ed., *Programas de salud reproductiva para adolescentes. Los casos de Buenos Aires, México, D.F. y San Pablo*, Centro de Estudios de Estado y Sociedad, Buenos Aires, Argentine, p. 117-194.

STERN, C., *et al.* (2001), "Gender stereotypes, sexual relations, and adolescent pregnancy in the lives of youngsters of different socio-cultural groups in Mexico", Paper presented at the IUSSP XXIV General Population Conference, Salvador, Bahia, Brazil, August 17-23.

STUPP, P., and J. M. CÁCERES (2001), "The relationship between age at completion of schooling and age at first birth in El Salvador", Paper presented at the IUSSP XXIV General Population Conference, Salvador, Bahía, Brazil, August 17-23.

THE ALAN GUTTMACHER INSTITUTE (1990), *Today's Adolescents, Tomorrow's Parents. A Portrait of the Americas*, New York, N.Y.

THE ALAN GUTTMACHER INSTITUTE (2001), *Can More Progress Be Made? Teenage Sexual and Reproductive Behaviour in Developed Countries*, New York, N.Y.

UNITED NATIONS (1989), *Adolescent Reproductive Behaviour. Evidence from Developing Countries*, vol. II, Department of International Economic and Social Affairs, Population Studies, New York, N.Y.

VILLA, M., and J. RODRÍGUEZ (2002), "Vulnerabilidad sociodemográfica: Viejos y nuevos riesgos para comunidades, hogares y personas", Santiago, Chile, CEPAL, LC/R.2086.

WELTI, C. (2000), "Análisis demográfico de la fecundidad adolescente en México", *Papeles de Población*, vol. 6, no. 26, p. 43-87.

ZÚÑIGA, E., D. DELGADO and B. ZUBIETA (2000), "Tendencias recientes del embarazo adolescente en México", Comisión Nacional de la Mujer, *Foro Embarazo en Adolescentes. Avances y Retos*, Mexico, Secretaría de Gobernación, p. 18-27.

Appendix

Selected characteristics of informants

	Marginal sector (very poor)	**"Popular" sector (poor)**	**Upper-middle class (non-poor)**
Age at interview	Guadalupe, 16	Natalia, 19	Angélica, 20
History	When 14, her father was involved in an accident and disappeared for three months.	Lives with both parents.	From Oaxaca. Father, an engineer, died in automobile accident when she was 12. Mother, a pedagogue, had to work. Downward mobility.
Family context	Strong relationship with father. Had to help parents with work and went with mother to look for "lost" father.	Youngest of 4 siblings. Tense situation between parents. Father drinks and is jealous because mother works.	Felt abandoned when father died, but friend of mother took care of her and brother while mother worked.
Education	Could not attend school during disappearance of father. In spite of promisses teachers didn't help her recover. Quit school after 2nd grade secondary.	Finished preparatory school. No expectations to study beyond that. Preferred to work.	Had to move to a family-owned school in order not to pay. Came 3 years ago to study university in Mexico City.
Heterosexual relations	During father's disappearance met a boy on the way to school and got pregnant.	Had several boyfriends but different when she met her partner, whom she introduced to her family; earned their confidence.	Boyfriend in Oaxaca when she was 17.
Sexual experience. Pregnancy.	Wasn't sure she was pregnant. Only told boyfriend about pregnancy after three months. Boyfriend told her parents.	First experience at 17, after a year of going steady. Took care through *coitus interruptus*. Got pregnant. Had already planned to marry.	Had sex with him before coming to Mexico City. Wasn't prepared but doesn't repent. Worried about becoming pregnant: moral condemnation; truncating her studies.
Present condition	One-year-old son. Lives with partner in a room in father-in-law's house	She and partner working to save money for marriage. Has 3-month-old son; lives with partner in her parents' house.	Lives in house of uncles and cousins. Wants to finish studies, travel, undertake postgraduate studies in Europe.

6

SOCIAL INEQUALITIES AND RISKY SEXUAL BEHAVIOURS AMONG YOUTH IN THE IVORIAN URBAN MILIEU

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1. Introduction

The sexual and reproductive health of young people is central to the current concerns in meeting their needs. This is particularly true in sub-Saharan Africa, where available data reveal a deplorable situation. In this region of the world, characterized by an extremely young population (more than half the population is less than 20 years old), sexual life begins early, multiple partnerships are developed and the number of pregnancies prior to marriage has increased because of the systematic non-use of condoms or other modern contraceptive methods. The

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health risks of adolescent mothers and their children have, as a consequence, become incalculable.

Research on factors explaining these changes in sexuality has shown the influence of modernization, with its corollary of "social disorganization", which would have led to a weakening of the authority of the elders over younger persons and of the family group over the children, thus according young people the freedom to practice sexual behaviours contrary to traditional morals (Rwenge, 2000; Diop, 1995; Gueye *et al.*, 2001). This is especially true in urban areas. Other researchers emphasize the approach termed "rational adaptation", according to which entering into a sexual relationship would result from a rational decision to attempt to find support of an economic nature. In this way, young girls can keep up sexual relations with men to the purpose of obtaining money, gifts or diverse other favours so as to provide for their needs. The role played by this factor in sub-Saharan Africa is all the greater because the economic recession confronting this continent since the beginning of the 1980s and the worsening of living conditions in both town and country have made the populations more vulnerable. Destitute children, who generally have no financial support, and in particular adolescents who need to pay for their studies, have thus become the first victims.

In the Ivory Coast, as everywhere else in Africa south of the Sahara, young people (girls and boys) are more likely than their elders to adopt risky sexual practices. The socioeconomic context in which they live sometimes exerts a negative influence on their decisions and practices in matters of sexual and reproductive health, thus increasing the risk of sexually transmitted infections and unwanted pregnancies that are liable to jeopardize their social success.

It is therefore important to identify the categories of youth most exposed to risky sexual practices, in order to help in better targeting the activities of numerous reproductive health programmes for young people. From this perspective, we examine the risky sexual behaviours of young Ivorians, that is, individuals of both sexes aged from 15 to 24 years at the time of the survey. According to the data from the last general population census, in 1998, youth aged from 10 to 24 years represent 34% of the total population; this proportion is 39% in the urban milieu and 29% in the rural milieu. That gives an idea how the minority of the concerned population is substantial. Three aspects of risky sexual behaviour are analysed: early commencement of sexual life,

multiple partnerships and non-use of condoms during sexual intercourse.

We shall endeavour to verify the two following hypotheses:

– the economic and social situation in which the young people live influences their sexual behaviour;
– youth who live in difficult circumstances have greater probabilities of adopting risky sexual behaviour than those who live in well-off conditions.

The data that have been employed to confront our hypotheses with facts come mainly from a basic survey on behaviour as regards STDs/HIV/AIDS among youth conducted in the Ivory Coast in the framework of the project "Family Health and the Prevention of AIDS" ("Santé familiale et prévention du Sida" (SFPS)).

This paper is divided into three parts. The first part presents elements of a methodological nature. The second part examines the inequalities among different groups of young people, defined according to their living conditions, in terms of risky sexual behaviour. The third part is devoted to a discussion of the main results.

2. Data and methods

2.1. A few characteristics of the milieu under study

Located in West Africa on the Gulf of Guinea, the Ivory Coast counted 15.366 million inhabitants at the 1998 census. The demographic growth rate, which is decreasing, attained 3.3% per year over the intercensal period 1988-1998. The country has not yet undergone the "urban transition", that is, the state in which the urban population constitutes a majority of the total population. The rate of urbanization reached 43% in 1998. This rate has undergone a rapid development since the 1950s: 13% in 1955, 32% in 1975 and 39% in 1988 (Doudou, 2001). Migrations, natural growth and the reclassification of certain rural zones into urban space are at the origin of this rapid urbanization. As is frequently the case, the urban structure of the Ivory Coast is marked by the phenomenon of "dominance", that is, the predominance of a megapolis. In 1998, for example, Abidjan, the capital, counted nearly 2.8 million inhabitants, whereas Bouaké, the second city, had less than 0.5 million inhabitants. The number of towns having

more than 100,000 inhabitants went from 2 in 1975 to 5 in 1988 and then to 9 in 1998.

Like a number of French-speaking countries in Africa, the Ivory Coast only recently adopted a population policy, having for a long time been reluctant to do so. Influenced by the economic crisis and conditions linked to the structural adjustment programme, a population policy declaration was adopted in March 1997. The Ivory Coast ratified the Programme of Action of the International Conference on Population and Development held in Cairo in 1994, which favoured the intensification of activities concerning reproductive health begun in the early 1990s. Since 1990, reference documentation on this subject has been available (République de Côte-d'Ivoire, Ministère de la Santé publique, 1999).

Diverse forms of inequality co-exist at a high level in the Ivory Coast. They were sustained during the different phases of economic evolution in the country since the 1960s: a phase of economic growth from 1960 to 1980, through which it joined the ranks of the countries of intermediate income; a phase of crisis and economic uncertainties since the early 1980s, taking the Ivory Coast to the category of very indebted poor countries.

To gain a more precise idea of these inequalities, we place emphasis on monetary poverty. The incidence of poverty increased from 10% in 1985 to 32% in 1993 and reached 37% in 1995, before slightly decreasing to 34% in 1998. Poverty affects, to an unequal extent, all areas of the country. Between 1993 and 1995, the incidence of poverty increased everywhere except in the secondary towns, where it fell (31% in 1993 as compared with 29% in 1995) (République de Côte-d'Ivoire, Institut National de la Statistique, 1999). These inequalities could underlie the stagnation of sexual and reproductive health.

Data from the last demographic and health survey, 1998-1999, show that the median age of women at the time of the first sexual intercourse was 16 years. Nearly all (93%) had already had their first sexual intercourse by the age of 22 years. This precocity remains true irrespective of generation, residential milieu or religion; the age at which sexual life is begun, in fact, is between 15 and 17 years, depending on population category (Institut National de la Statistique and ORC Macro, 2001). Contrary to a fair number of developing countries, the men in the Ivory Coast begin their sexual life somewhat later, roughly 2.5 years, than do the women. Would this be due to the "rational adap-

tation" of women? The commencement of the sexual life of men varies according to the level of education and the residential milieu: the earliness of sexual relations is somewhat more pronounced in towns than in the rural milieu (18 years as compared with 19 years); the higher the level of education of the men, the earlier they begin sexual life (17.5 years for those who have a secondary education or higher, 18.5 years for primary education and 20 years for those who are illiterate).

While women and men begin very early with their sexual experience, they also have relations with several sexual partners. The demographic and health survey of 1998-1999, which collected information on this subject for the preceding twelve-month period, shows that roughly 2% of the married women and 8% of the single women stated that they had had at least two sexual partners during the base period. These women are found to varying degrees in all socioeconomic categories. Women living in towns and with a primary education have more multiple partners than women from the rural milieu, illiterate women and those with a secondary education or higher. The men who said that they had at least two sexual partners are clearly more numerous than their female counterparts: 23% as compared with 2% among those who are married, and 34% as compared with 8% among single women. This is verified in all socioeconomic categories.

In numerous cases, sexual intercourse is not protected. The condom, which today constitutes the most efficacious means of protection in heterosexual relations, is well known, but its use remains limited. According to data from the demographic and health survey of 1998-1999, for example, only 7% of the men used a condom at the time of the survey; this proportion is somewhat higher in the urban milieu (10%) than in the rural milieu (6%) (Institut National de la Statistique and ORC Macro, 2001). Nevertheless, it should be noted that the sale of condoms has greatly developed over the last years. From 1993 to 2000, it increased by 3.5 times, which is an annual average growth rate of 19% (Family Health International, 2001).

2.2. The survey among youth in the urban milieu

The data used in this paper come from a survey on behaviours concerning STDs/HIV/AIDS among young people, conducted in the Ivory Coast in the framework of the project "Family Health and the

Prevention of AIDS"[2]. This survey concerned youth between 15 and 24 years from three large cities in the country: Abidjan (the economic capital and largest city in the country, with 3.2 million inhabitants), Bouaké (the second city, with 509,000 inhabitants) and Korhogo (the fifth city in the country, with 152,000 inhabitants). From the geographic point of view, these cites are located in the south, the centre and the north, respectively, of the Ivory Coast. They reflect the economic, social and demographic diversity of the Ivorian urban milieu.

The survey involved a sample of 2,681 youth from 15 to 24 years, of whom 1,370 in Abidjan, 651 in Bouaké and 660 in Korhogo. A questionnaire was administered by direct interview. It includes various themes, organized in eleven sections: sociodemographic characteristics, exposure to media, characteristics of parents and living conditions, norms and values relating to gender, beliefs, sociocultural norms and values, attitudes concerning sexual relations, social interactions and support, self-perception, sexual behaviours, STDs/HIV/AIDS, behaviour regarding alcohol, tobacco and drugs.

The constitution of the sample rests on the method of random sampling in two stages: first a systematic random sampling of census districts (spatial units comprising on average 1,000 inhabitants) was conducted; in the second stage, households were drawn within these districts.

2.3. Indicators of risky sexual behaviour included in the analysis

The concept of risky sexual behaviour encompasses several dimensions. In the framework of the present analysis, three aspects have been considered: the early commencement of sexual life, multiple partnerships and the systematic non-use of condoms during sexual intercourse.

How were each of these aspects measured? As concerns the "early commencement of sexual life", the variable "time-period before commencement of sexual life" was constructed by considering the age of 12 years as the youngest possible beginning of sexual life. This age is commonly accepted as the lowest age at which women can be married. This, it should be noted, is near to the average age at the first menstruations,

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2. We wish to thank those responsible for the Project "Santé familiale et prévention du Sida" (SFPS), who provided us with these data.

which is, according to the Ivorian survey on fertility of 1980-1981, between 13.4 and 14.5 years, irrespective of population category.

When the individual has already had sexual intercourse, the time-period before the commencement of sexual life is equal to the difference between this age of 12 years and the age at the time of the first sexual intercourse, otherwise, it is equal to the difference between this age and the age at the time of the survey. To distinguish between the "closed" and the "truncated" time-periods, a dummy variable was constructed: it takes the value of 1 if sexual intercourse has already taken place, otherwise the value 0. Among those surveyed, 68% had already begun their sexual life, compared with 32% who had not. For the closed intervals, the average time-period before commencement of sexual life is 2.9 years among the young people aged 15-17 years, 4.5 years among those of 18-20 years and 5.0 years among the young people of 21-24 years.

As concerns multiple partnerships, the indicator adopted is the number of sexual partners over the course of the last three months. The base period covering the last three months makes it possible to circumvent errors in statements due to memory, but also to control the effect of age. Another variable made it possible to measure this indicator, namely, the number of sexual partners since the first intercourse. This was not retained because the base period varies greatly, especially for individuals who are at the borderline of the age bracket of interest. For this dimension of risky sexual behaviour, only those who have begun their sexual life are involved. Among them, 12% stated that they had two or more sexual partners during the last three months, while 60% had only one sexual partner and 28% had no partner.

As for the use of condoms during sexual intercourse, we will use two indicators: the use of a condom at some time and the use of a condom during the most recent sexual intercourse. The first indicator will make it possible to measure the extent to which condoms are used. However, in view of the phenomenon of desisting from the use of contraceptive methods, this indication is not sufficient to discern the extent of protection during sexual intercourse; the second indicator was introduced in order to make up for this insufficiency. Among the youth who have begun their sexual life, 16% have never used a condom, while 84% have already used one; during the most recent sexual intercourse, 37% of the young people did not use a condom, as compared with 63% who did.

The variation of risky sexual behaviour of youth, girls and boys, was examined on the basis of different categories of young people homogeneous enough from the point of view of their individual socio-economic profile and of that of their parents.

2.4. Construction of a typology of youth according to their living conditions

A typology of youth was done by means of the analysis of automatic classification. It is based on two types of variables (Table 1). The first type expresses the human capacities of the young people. It is more precisely a question of the type of economic activity, level of education and of the place where the greater part of the first years of life were spent. The second type of variables accounts for the living conditions of the parents, their level of education, the sex of the head of the household, the level of his or her education and main occupation at the time of the survey.

Three categories of youth are thus distinguished[3]: those whose living conditions are well-off (40% of the total), those whose living conditions are modest (49%) and those whose living conditions are difficult (11%). What are the main features of these different categories?

The young people in the first category have lived for the most part in towns during the first 12 years of their life. They are pupils or students (68% of the cases); their financial needs are met entirely by their parents (in 79% of the cases). They have parents, whether the father or the head of the household, who exercise a remunerative activity in the private or public sector; the mother exercises a commercial or artisan activity.

Those who are classified in the category of modest living conditions were, like those in the first group, nearly all socialized in the urban milieu (73%). They work in the informal sector (42%) and their needs in terms of money are most often met by persons other than their parents. They come from households in which the head person is illiterate (72%). The father and above all the mother are themselves illiterate (53% and 85% of the cases, respectively).

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3. The results of this categorization were obtained with the help of the software SPAD (version 4.0).

Table 1
Distribution of interviewees according to characteristics serving as basis of the construction of the typology of youth (survey "Youth", SFPS, 2002)

Variables and modalities	Numbers	
	Absolute	Relative
Level of education of the young person		
Without education	503	18.8
Primary/Koranic	652	24.3
Secondary and higher	1,526	56.9
Occupation of the young person		
Without occupation/Apprentice/Agricultural	509	19.2
Pupil or student	1,220	45.9
Formal sector wage-earner	53	2.0
Informal sector wage-earner	874	32.9
Milieu of socialization of the young person: 12 first years of life		
Urban	2,215	82.6
Rural	465	17.4
Assumption of financial needs exclusively by the parents		
Yes	1,506	56.2
No	1,173	43.7
Education of the father		
Illiterate	788	29.4
Primary	260	9.7
Secondary	505	18.8
Higher	245	9.2
Do not know	308	11.5
Father is not living	575	21.4
Occupation of the father		
Agriculture	466	17.4
Commerce/craft industry	578	21.6
Private/Public wage-earner	738	27.5
Other (pupil, clergy, without activity…)	326	12.2
Father is not living	571	21.3
Education of the mother		
Illiterate	1,478	55.1
Primary	363	13.5
Secondary	325	12.1
Higher	58	2.2
Do not know	173	6.5
Mother is not living	284	10.6

(…)

(…)		
Occupation of the mother		
Agriculture	180	6.7
Commerce/craft industry	1,065	39.7
Private/Public wage-earner	178	6.6
Other (pupil, nun, domestic, without activity…)	970	36.3
Mother is not living	285	10.7
Sex of the head of the household in which the person surveyed spent the greater part of his or her childhood		
Male	2,207	82.4
Female	474	17.6
Education of the head of the household in which the person surveyed spent the greater part of his or her childhood		
Illiterate	1,096	40.9
Primary	313	11.7
Secondary	629	23.5
Higher	302	11.3
Do not know	339	12.6
Occupation of the head of the household in which the person surveyed spent the greater part of his or her childhood		
Agriculture	449	16.7
Commerce/craft industry	873	32.7
Private/Public wage-earner	1,071	39.9
Other (pupil, clergy, domestic, without activity…)	286	10.7
Total	2,681	100.0

Those in the third category are the least favoured. Socialized like all the others in an urban milieu (82% of the cases), they are motherless (100%) or fatherless (99%), which no doubt explains that their financial needs are met in the large majority of cases by other persons.

2.5. Control variables

If risky sexual behaviours are likely to vary according to the living conditions of the youth, they can also be influenced by different factors, which have been grouped in three domains: demographic, sociocultural and psychosocial.

On the demographic level, we have selected: age, sex, parity, marital status; on the sociocultural level: membership in an association, involvement in one or several spare-time activities; on the psychosocial

level: the importance accorded to the opinion of others concerning sexual behaviours, religion, self-esteem, knowledge of AIDS.

The result of the Chi-square test shows that the distribution of youth according to these control variables differs according to living conditions. Only the variables of age and self-esteem represent exceptions. All the socioeconomic categories are slightly dominated by women (52-54%).

In two cases, namely membership in one or several associations and knowledge of AIDS, the difference between the groups is only statistically significant at the threshold of 10%. The proportion of those who are members of an association varies from 20% (modest conditions) to 25% (difficult conditions). Nearly all the young people have heard about AIDS (99%).

As regards the other variables, the difference between the groups is very significant. In particular, it should be noted that individuals benefiting from better living conditions have an age structure that is clearly younger than those living in difficult conditions (the age bracket 15-17 years comprises 40% of the youth in the first category, as compared with 28% in the second). The age structure of youth living in modest conditions takes an intermediary position: 31% are between 15 and 17 years.

In short, it will be noted that most of the control variables included in this analysis are correlated at the bivariate level with the risky sexual behaviours. This means that the sexual behaviours vary according to these variables.

The analysis of the relation between living conditions and sexual behaviours among the young people was organized in two stages. In the first, one proceeded with a bivariate analysis. In this framework, the differences according to living conditions were examined by considering first of all the entire sample and, then, by distinguishing men and women. In the second stage, the analysis was made in greater detail by submitting the data to multivariate methods. The Cox model was used to analyse the commencement of sexual life, while the logistic regression model was carried out for the three other dimensions of sexual behaviour (the number of sexual partners during the three months preceding the survey, the use of condoms at some time and at the time of the most recent sexual intercourse). For each of these variables, two models were elaborated. The first model includes only the living conditions of the young people and thus reveals the gross effect

Table 2 — Distribution (in %) of youth according to living conditions and control variables (survey "Youth", SFPS, 2002)

Variables	Living conditions				
	Good	Modest	Difficult	Total	Sign.
Age					***
15-17 years	40.4	31.5	28.1	34.7	
18-20	33.7	34.5	36.1	34.3	
21-24	25.9	34.0	35.8	31.0	
Sex					ns
Male	48.1	46.2	47.0	47.1	
Female	51.9	53.8	53.0	52.9	
Experience as regards fertility					***
Ever had children	10.8	21.3	23.2	17.3	
Has had no child	89.2	78.7	76.8	82.7	
Experience as regards marriage					***
Ever married	6.4	16.0	16.7	12.2	
Never married	93.6	84.0	83.3	87.8	
Member of one or several associations					*
Yes	23.2	20.0	24.9	21.8	
No	76.8	80.0	75.1	78.2	
Regular spare-time activity					**
Has a spare-time activity	80.9	75.5	73.0	77.4	
Has no spare-time activity	19.1	24.5	27.0	22.6	
Importance attached to the opinion of others as concerns sexual behaviours					***
None	5.9	5.7	4.9	5.7	
Little importance	7.2	8.9	14.0	8.8	
Medium importance	26.2	35.2	48.8	33.0	
Great importance	60.7	50.2	32.3	52.5	
Religion					***
Christian	18.0	21.3	18.2	19.6	
Muslim	64.1	34.9	45.3	47.8	
Other	17.9	43.8	36.5	32.6	
Self-esteem: Do you ever think that you have any good qualities?					ns
Often	91.0	90.8	88.4	90.6	
Seldom	6.9	7.0	9.8	7.3	
Never	1.6	1.8	0.7	1.6	
Do not know	0.5	0.4	1.1	0.5	
Knowledge of AIDS					*
Yes	99.6	98.9	99.3	99.2	
No	0.4	1.1	0.7	0.8	
Total	1,083	1,311	285	2,680	

Chi-square significance: *** 1 %; ** 5 %; * 10 %; ns: not significant.

of this variable. The second model takes into account the other variables likely to significantly influence sexuality among youth; it thus makes it possible to measure the net effects of living conditions. The analyses were carried out separately for the two sexes.

3. Results

The age at the time of the first sexual intercourse was examined, then the number of sexual partners during the last three months and the systematic use of condoms.

3.1. Commencement of sexual life

The result of the association test shows that the living conditions of young people have an influence on the age at which they begin their sexual life. The proportion of those who have not yet begun their sexual life is lower among those who live in modest (29%) and difficult (23%) conditions than among those who are in better conditions (Table 3). By the same token, the proportion of youth who began sexual life early (before 18 years) is higher among the underprivileged: 65% among those who live in difficult conditions, 61% in modest conditions, as compared with 54% for those who benefit from well-off conditions.

When the sexes are considered separately, it is observed that the influence of the living conditions on the age at which sexual life begins is not verified among the young men; the inequalities among the different categories of young men are not significant. On the other hand, the proportion of women who have begun sexual life before the age of 18 years is higher among the underprivileged; by the same token, those who have not yet begun their sexual life are less numerous in this category: 21% for those who live in difficult conditions, 28% for those who are in modest conditions, as compared with 40% for those who benefit from well-off conditions.

The application of the Cox model confirms the results obtained in the bivariate analysis (Table 4). Among the young men, there is no relation between the age at which they begin sexual life and living conditions. The differences between the relative risks of the different categories of young people are not significant. Among the women,

Table 3
Result of the association test between living conditions and the age of commencement of sexual life according to sex (survey "Youth", SFPS, 2002)

Age of commencement of sexual life	Living conditions				
	Good	Modest	Difficult	Total	Sign.
Both sexes					***
Before 18 years	53.9	61.0	65.2	58.6	
After 18 years	6.6	8.2	9.8	7.7	
Not specified	1.2	1.9	1.8	1.6	
Not begun	38.3	28.9	23.2	32.1	
Total	100.0	100.0	100.0	100.0	
Total number	1,083	1,312	285	2,680	
Males					ns
Before 18 years	56.0	60.2	62.7	58.8	
After 18 years	6.0	8.1	9.7	7.3	
Not specified	1.3	1.7	2.2	1.6	
Not begun	36.7	30.0	25.4	32.3	
Total	100.0	100.0	100.0	100.0	
Total number	521	606	134	1,261	
Females					
Before 18 years	52.0	61.8	67.6	58.5	***
After 18 years	7.1	8.2	9.9	8.0	
Not specified	1.0	2.1	1.3	1.6	
Not begun	39.9	27.9	21.2	31.9	
Total	100.0	100.0	100.0	100.0	
Total number	562	706	151	1,149	

Chi-square significance: *** 1 %; ** 5 %; * 10 %; ns: not significant.

however, they are significant. The first model shows that in comparison with the young women who benefit from better living conditions, the risk of the first sexual intercourse for the categories living in modest conditions and in difficult conditions is multiplied by 1.2 and 1.4, respectively. These effects are significant at the threshold of 1%. The second model shows that the influence of the living conditions persists when the effect of demographic, sociocultural and psychosocial variables are controlled. The odds ratios are 1.2 and 1.4, respectively. This model shows, moreover, that the participation in spare-time activities and religion are crucial factors for the age at the time of the first sexual intercourse.

Table 4
Odds ratios of the regression analysis on commencement of sexual life of youth in the Ivorian urban milieu (survey "Youth", SFPS, 2002)

Independent variables	Males		Females	
	Model I	Model II	Model I	Model II
Living conditions (Good conditions)				
Modest conditions	1.0386	1.0404	1.2116***	1.2456***
Difficult conditions	1.1175	1.1505	1.3756***	1.4442***
Age (15-17years)				
18-20		1.1227		0.9343
21-24		1.3113		1.0264
Member of one or more associations (Yes)				
No		0.9404		1.1708*
Regular spare-time activity (Has a spare-time activity)				
No spare-time activity		0.5940***		0.9607
Importance attached to the opinion of others regarding sexual behaviours (None)				
Little importance		1.2357		1.0860
Medium importance		1.1564		0.9102
Great importance		1.1954		0.1015
Religion (Christian)				
Muslim		0.9376		0.8999
Other		1.2350**		1.2438**
Self-esteem: Do you ever think that you have any good qualities? (Often)				
Seldom		0.7940		1.0688
Never		0.9825		1.4006
Do not know		0.4153		0.7799
Knowledge of AIDS (Yes)				
No		0.0001		0.7392
-2 log of likelihood	10112	10059	11986	11950
Chi-square of the model	0.9	45	11.4	36.3
Degrees of freedom	2	15	2	15

Significance of the Chi-square: *** at 1 %; ** at 5 %; * at 10 %; no sign: not significant.

3.2. Multiple partnerships

The results of the association test show that the fact of having multiple partners does not depend on the living conditions in which the young people live (Table 5). This holds true for both men and

Table 5
Result of the association test between living conditions and the number of partners during the last three months (survey "Youth", SFPS, 2002)

	Living conditions				
	Good	Modest	Difficult	Total	Sign.
Both sexes					ns
At most 1	87.6	88.6	87.6	88.1	
Several	12.4	11.4	12.4	11.9	
Total	100.0	100.0	100.0	100.0	
Total number	668	932	218	1,818	
Males					ns
At most 1	78.8	81.1	83.0	80.4	
Several	21.2	18.9	17.0	19.6	
Total	100.0	100.0	100.0	100.0	
Total number	330	424	100	854	
Females					ns
At most 1	96.2	94.9	91.5	94.9	
Several	3.8	5.1	8.5	5.1	
Total	100.0	100.0	100.0	100.0	
Total number	338	508	118	964	

Chi-square significance: *** 1 %; ** 5 %; * 10 %; ns: not significant.

women. The proportion of those who stated that they had two or more partners during the last three months fluctuates according to category, around 12% for both sexes together, 19% for the young men and 5% for the young women. One also observes that the proportion of men who said they had at least two sexual partners in the three months prior to the survey is higher than that of the women.

The logistic regression analysis does not lead to the same result for the two sexes (Table 6). Among the men, it confirms the result of the bivariate analysis. Compared with the young men benefiting from good living conditions, the chances of having two or more partners are reduced by 21% among those living in modest conditions and by 31% among those who live in difficult conditions. But the differences are not significant. This result could mean that multiple partnerships among the young men are not based solely on considerations of an economic nature. It should be mentioned that some variables such as age, marital status and participation in a spare-time activity have an

Table 6
Odds ratios of the regression analysis on the number of stated sexual partners by youth in the Ivorian urban milieu (last three months) (survey "Youth", SFPS, 2002)

Independent variables	Males		Females	
	Model I	Model II	Model I	Model II
Living conditions (Good conditions)				
Modest conditions	0.8671	0.7924	1.3485	1.3841
Difficult conditions	0.7638	0.6907	2.3148*	2.4739*
Age (15-17years)				
18-20		5.1574		0.7946
21-24		8.3190**		1.1538
Has ever had children (Yes)				
Has had no children		0.8246		1.0465
Marital status (Ever married)				
Never married		0.5771*		1.2870
Member of one or several associations (Yes)				
No		0.9724		2.0358
Regular spare-time activity (Has a spare-time activity)				
Has no spare-time activity		0.5157*		0.9188
Importance attached to the opinion of others on sexual behaviours (None)				
Little importance		1.0802		0.7633
Medium importance		1.0979		0.6940
Great importance		0.8185		0.6733
Religion (Christian)				
Muslim		1.0376		0.6925
Other		1.0822		2.3840**
Self-esteem: do you ever think that you have any good qualities? (Often)				
Seldom		1.2963		1.6330
Never		3.5244		1.9344
Do not know				0.0075
Knowledge of AIDS (Yes)				
No		0.0315		0.0043
Constant (B)	-1.3160***	-2.3935**	-3.2189***	-3.8808***
-2 log of likelihood	843	815	384	
Chi-square of the model	1.1	29.9	3.5	
Degrees of freedom	2	16	2	

Chi-square significance: *** 1 %; ** 5 %; * 10 %; ns: not significant.

important effect on multiple partnership. Compared with youth from 15-17 years, the odds are 8 times greater that those from 21-24 years engage in sexual relations with several partners.

Among the women, on the other hand, the fact of having multiple partners depends on living conditions. The second model shows that those living in difficult conditions are 2.5 times more likely to have multiple partners than those who are in better conditions. There is no difference between the latter women and those living in modest conditions.

3.3. Use of condoms

The bivariate analysis shows that, whatever the living conditions, the majority of the young people use condoms. Among the young men, there is no difference among the three categories: around 91% of the youth have already used condoms at some time in their lives and 71% have used a condom during the most recent sexual intercourse (Table 7).

On the other hand, the young women in good living conditions differ from others with higher frequencies of use: 89% have already used a condom at some time in their lives and 60% have used a condom during the most recent sexual intercourse. These proportions are 71% and 51%, respectively, for young women living in modest conditions and 73% and 49% for those who live in difficult conditions.

Among the men, the logistic regression analysis confirms the results of the bivariate analysis. Compared with those benefiting from well-off conditions, the probability that young men from other categories use a condom is reduced, but the differences are not significant (Tables 8 and 9).

Among the young women, the second model shows that in comparison with those in the category of well-off conditions, the fact of living in modest conditions reduces by 42% the chances of using condoms at some time in life; the relative risk reduction is 30% for those who live in difficult conditions. The differences between the extreme categories, however, are not significant (Table 8). We shall note therefore that the intermediary category differs significantly from the first (good conditions) by a lesser likelihood to use condoms during sexual intercourse, but, on the other hand, the practices of the extreme categories are almost identical because the difference is not significant.

Table7
Result of the association test between living conditions
and the systematic use of condoms (survey "Youth", SFPS, 2002)

	Living conditions				
	Good	Modest	Difficult	Total	Sign.
Use of a condom at some time					
Both sexes					***
Yes	90.7	80.2	79.9	84.0	
No	9.3	19.8	20.1	16.0	
Total	100.0	100.0	100.0	100.0	
Total number	668	933	219	1 820	
Males					ns
Yes	92.4	91.0	88.0	91.2	
No	7.6	9.0	12.0	8.8	
Total	100.0	100.0	100.0	100.0	
Total number	330	424	100	854	
Females					***
Yes	89.1	71.1	73.1	77.6	
No	10.9	28.9	26.9	22.4	
Total	100.0	100.0	100.0	100.0	
Total number	338	509	119	966	
Use of a condom during the most recent sexual intercourse					
Both sexes					**
Did use	67.0	60.2	59.5	62.8	
Did not use	33.0	39.8	40.5	37.2	
Total	100.0	100.0	100.0	100.0	
Total number	603	749	173	1 525	
Males					ns
Did use	73.9	69.2	70.1	71.1	
Did not use	26.1	30.8	29.9	28.9	
Total	100.0	100.0	100.0	100.0	
Total number	303	386	87	776	
Females					**
Did use	60.0	50.7	48.8	54.2	
Did not use	40.0	49.3	51.2	45.8	
Total	100.0	100.0	100.0	100.0	
Total number	300	363	86	749	

Chi-square significance: *** 1 %; ** 5 %; * 10 %; ns: not significant.

Table 8
Odds ratios of the logistic regression analysis on the use of a condom at some time by youth in the Ivorian urban milieu (survey "Youth", SFPS, 2002)

Independent variables	Males		Females	
	Model I	Model II	Model I	Model II
Living conditions (Good conditions)				
Modest conditions	0.8300	0.8461	0.3027***	0.5843**
Difficult conditions	0.5992	0.5434	0.3342***	0.7019
Age (15-17 years)				
18-20		4.0233***		2.110*
21-24		7.1768***		2.4059*
Has ever had children (Yes)				
Has had no children		0.6388		1.8922***
Marital status (Ever married)				
Never married		1.5800		1.5906**
Member of one or several associations (Yes)				
No		0.4047***		0.6278*
Regular spare-time activity (Has a spare-time activity)				
Has no spare-time activity		0.5466		0.7220*
Importance attached to the opinion of others on sexual behaviours (None)				
Little importance		1.1219		0.7591
Medium importance		1.1332		0.6202
Great importance		0.8769		1.0933
Religion (Christian)				
Muslim		0.5925*		0.2286***
Other		1.0776		0.900
Self-esteem: Do you ever think you have any good qualities? (Often)				
Seldom		0.6322		0.7941
Never		0.2740		0.4614
Do not know				0.4398
Knowledge of AIDS (Yes)				
No		0.002		0.3408
Constant (B)	2.5046***	1.9239**	2.0962	1.4605**
-2 log of likelihood	506	467	984	857
Chi-square of the model	1.8	41.2	42.8	169.8
Degrees of freedom	2	16	2	17

Chi-square significance: *** 1 %; ** 5 %; * 10 %; ns: not significant.

Table 9
Odds ratios of the logistic regression analysis on the use of condoms during the most recent sexual intercourse by youth in the Ivorian urban milieu (survey "Youth", SFPS, 2002)

Independent variables	Males		Females	
	Model I	Model II	Model I	Model II
Living conditions (Good conditions)				
Modest conditions	0.7878	0.8130	0.6853**	0.8378
Difficult conditions	0.8238	0.8508	0.6364*	0.8486
Age (15-17years)				
18-20		1.6332		0.8533
21-24		0.9242		0.7405
Has ever had children (Yes)				
Has had no child		1.4294		1.7603**
Marital status (Ever married)				
Never married		1.7698*		2.9039***
Member of one or several associations (Yes)				
No		1.1020		1.4507*
Regular spare-time activity (Has a spare-time activity)				
Has no spare-time activity		0.9469		0.9706
Importance attached to the opinion of others on sexual behaviours (None)				
Little importance		0.7870		0.4556*
Medium importance		0.8483		0.4051*
Great importance		0.8103		0.5526*
Religion (Christian)				
Muslim		1.1397		0.9948
Other		1.3256		0.9518
Self-esteem: Do you ever think you have any good qualities? (Often)				
Seldom		0.8331		0.7181
Never		0.4765		0.4093*
Do not know				0.0028
Knowledge of AIDS (Yes)				
No				0.7380
Constant (B)	1.0467***	0.0839	0.4055***	-0.2835
-2 log of likelihood	931	905	1026	943
Chi-square of the model	2.0	28.2	6.9	89.6
Degrees of freedom	2	15	2	17

Chi-square significance: *** 1 %; ** 5 %; * 10 %; ns: not significant.

As regards the use of condoms at the time of the most recent sexual intercourse, it is observed that the relation is no longer significant when the control variables are incorporated in the model (Table 9). The analysis also reveals the importance of demographic, sociocultural and psychosocial variables in the recourse of young women to condoms. The influence of marital status should be particularly noted. In comparison with ever-married young women, those who have never been married are 1.6 times more likely to use contraception at some time in life and 2.9 times more likely to use condoms at the time of the most recent sexual intercourse.

4. Discussion

The data from the survey "Youth" carried out in three large cities of the Ivory Coast show that the young city-dwellers have risky sexual behaviours: sexuality begins early, they have multiple partners and do not use condoms in a systematic manner. A similar result was already observed by Zanou and Nyankawindemera (2002) in a sample of young people residing in six towns in the Ivory Coast in the framework of BSS (Behaviours Surveillance Survey) studies.

The sexual behaviour of youth varies according to their social identification characteristics, those of their parents, and the condition of the milieu in which they were socialized and of the milieu in which they lived at the time of the survey. The inequalities in the different dimensions of sexual behaviour of youth were illustrated through a typology based on their socioeconomic characteristics and those of their parents. Three types of youth were defined at the end of a multiple classification analysis: those who are in well-off living conditions, those whose living conditions are modest and those who are in difficult living conditions. For each of the dimensions of risky sexual behaviour selected (the commencement of sexual life, multiple partnerships and the use of condoms at any time and during the last sexual intercourse), two models are implemented so as to assess the gross and net effects of the living conditions of young people.

The relation between living conditions and sexuality among young people varies according to sex. As regards commencement of sexual life, the application of the Cox model confirmed the influence of the living conditions among young women. The earliness of first sex is

more pronounced among the underprivileged young women. This result is to be compared with the theory of rational adaptation, according to which certain persons, because of their poverty, can choose to engage in sexual relations in order to resolve an economic or social problem. This type of argument is plausible in the Ivory Coast, all the more so as the economic recession that has been taking place since the 1980s and the worsening of living conditions in cities as well as in the country have made the populations vulnerable.

Nevertheless, one should not forget the role of customs and of social modernization, in particular as concerns the earliness of sexual relations among girls. In fact, the earliness of first sex among women is also explained by the custom of the early marriage of girls as well as by the tolerance of premarital sexual activities. These activities would have always been tolerated in animist societies or those converted to Christianity. And, in Islamized societies, which traditionally only accept sexual relations in the framework of marriage, there has been a weakening of social control.

Among men, on the other hand, the age of commencement of sexual life does not depend on the living conditions. Moreover, the commencement of sexual life is much later. The latter result runs counter to what has been observed in a number of countries. For example, Adegbola and Babatola (1999) have shown in their study on youth in Lagos that the commencement of sexual life is much earlier among men than among women. The exceptional result in the Ivorian urban milieu seems to be logical in a certain sense, for, owing to "rational adaptation", the young girls would appear to be more vulnerable than the young men.

Like the commencement of sexual life, the relation between the living conditions of the young people and multiple partnerships varies according to sex. Among the young men, neither of our two hypotheses was confirmed. At the level of bivariate analysis, as at the level of multivariate analysis, the living conditions of the young men would have no decisive influence on the fact of having sexual relations with multiple partners. This result, which is contrary to our expectations, suggests that the multiple partnerships of the young men are not based primarily on factors of an economic nature. This result can be supported by the theory of "social disorganization". According to this approach, the effects of modernization would have resulted in a weakening of the authority of the elders over the younger people and of the

family group over children, which leads the young people to have sexual behaviours contrary to traditional morals (Rwenge, 2000; Diop, 1995; Gueye *et al.*, 2001).

Multiple partnerships among young women, on the other hand, depend on the living conditions. The more unfavourable the conditions, the greater the risk that the young women will engage in relations with several partners. Here, the effect of "social disorganization" combines with that of "rational adaptation".

As for the use of condoms during sexual relations, it is observed that among young men there is no difference according to living conditions. Among the women, on the other hand, the more unfavourable the living conditions, the greater the tendency to not protect their intercourse. But, by controlling a certain number of factors, one observes, as concerns ever-use of condoms, that the intermediary category differs significantly from the first category (good conditions) by a lower likelihood to use condoms during sexual intercourse, but that, on the other hand, the practice of the extreme categories is nearly identical since the difference is not significant. Concerning condom use during the most recent sexual intercourse, the tendency suggested by the bivariate analysis (decrease in the use of condoms with the worsening of the living conditions of the women) is not confirmed.

This suggests that the recourse to condoms is not based primarily on the socioeconomic and material conditions of the individual. It is probable that representations concerning relations between partners and certain negative rumours relative to condoms would be more decisive. Interviews conducted with young men in the south-east Ivory Coast in the framework of a recent study revealed that condoms are most often used only at the beginning of a new relationship (Anoh, 2001). When the relationship continues, the use of condoms may be negatively perceived because synonymous with a lack of trust. Moreover, the informal communication networks spread a rumour according to which men would refuse pregnancies resulting of the failure of condoms, which prompts the young women to reject their use[4]. This rumour was cited both in individual interviews with women and in group interviews with young men.

4. The social importance of this rejection is discernible in the local vocabulary relative to the condom, which has developed terms such as having "*live*" sexual intercourse, which means intercourse without condom, and having "*play back*" sexual intercourse, that is, intercourse with condom.

5. Conclusion and recommendations

The aim of the present paper was to examine the influence of living conditions on sexual behaviour among youth in the urban milieu. Three aspects of sexual behaviour, usually considered in the literature as risk behaviours, were considered: the early commencement of sexual life, multiple partnerships, and the non-systematic use of condoms. The inequalities in these diverse aspects of sexual behaviour were illustrated by means of a typology based on the socioeconomic characteristics of the young people, as well as those of their parents, and included three modalities: youth in well-off living conditions, those whose conditions are modest and those who live in difficult conditions. A bivariate analysis was followed by a multivariate analysis.

It emerges from these analyses that the influence of living conditions on sexual behaviour among youth in the urban milieu varies according to sex. Among the young men, none of our hypotheses were verified. The latter have indeed risky sexual behaviours, but that could not be explained by the insecurity of their living conditions. The theory of "social disorganization" appears in this instance more plausible.

Among the young women, our hypotheses were verified for three variables: commencement of sexual life, the number of sexual partners, and the use of a condom at any time. The more deplorable the living conditions, the more the young women adopt risky sexual behaviours. This is explained by the phenomenon of "rational adaptation". But it is probable that the phenomenon of social disorganization, or more specifically the "demoralization of sex", also plays a role.

As regards the use of condoms during the most recent sexual intercourse, no difference was observed among the various categories of young women. This implies that the systematic use of condoms is based on non-economic factors. It is a question, for example, of the decision-making power of the woman, of the risk perception as to the non-use of condoms, etc.

These different analyses show that risky sexual behaviours observed among the young city-dwellers in the Ivory Coast are not solely dependent on socioeconomic conditions. Social change, the modernization of values and the lack of information also play a role.

Our analysis has implications at both the scientific and practical levels. At the scientific level, the study of the factors involved in the earliness of the commencement of sexual life among girls should be

reinforced by qualitative approaches and by analysing the long-term consequences of early sexual relations. This would make it possible to better understand the seriousness of the problem and attract attention to the issues of policy and programmes in this domain. The conditions for the systematic use of condoms should also be more adequately discerned.

At the practical level, the risk of adopting unsafe sexual behaviours being higher among the underprivileged young women, it is important to implement programmes to eradicate poverty. However, these programmes, the modalities of which remain to be specified, will not suffice to resolve the problem, because the risky sexual behaviours also result of the transformation of values and no doubt also of the lack of information. The logical framework of interventions in sexual and reproductive health must integrate, in addition to economic programmes, communication strategies for changing behaviours.

References

ADEGBOLA, O., and O. BABATOLA (1999), "Premarital and extramarital sex in Lagos, Nigeria", in: I. O. Orubuloye, J. C. Caldwell and J. P. M. Ntozy, eds., *The Continuing HIV/AIDS Epidemic in Africa: Responses and Coping Stragtegies*, Health Transition Centre for Epidemiology and Population Health, Australian National University, Canberra, p. 19-44.

ANOH, A. (2001), *L'émergence de la planification familiale en Côte-d'Ivoire*, PhD dissertation in demography, University of Paris-X-Nanterre, UFR SSA, Paris.

CHERLIN, A., and N. RILEY (1986), *Adolescent Fertility: An Emerging Issue in Sub-Saharan Africa,* PHN Technical Note 86-23, Washington, DC, The World Bank.

DIOP, Nafissatou J. (1995), *La fécondité des adolescents au Sénégal,* UEPA, Programme de petites subventions pour la recherche en population et développement, Synthetic Report no. 11, March.

DOUDOU, S. (2001), *Recensement général de la population et de l'habitation de 1998 (RGPH-98)*, Volume IV: *Analyse des résultats*, Tome 13: *Urbanisation*, Abidjan, Institut National de la Statistique.

FAMILY HEALTH INTERNATIONAL (FHI) (2001), *Analyse situationnelle des soins et prise en charge du VIH/SIDA et des infections sexuellement transmissibles en Côte-d'Ivoire,* Projet Santé Familiale et Prévention du Sida.

GUEYE, M., S. CASTLE and M. K. KONATE (2001), "Moments des premiers rapports sexuels des adolescents du Mali et implications pour la pratique contraceptive", *Perspectives Internationales pour le Planning Familial*, special issue, p. 2-8.

INSTITUT NATIONAL DE LA STATISTIQUE [Ivory Coast] and ORC MACRO (2001), *Enquête démographique et de santé. Côte-d'Ivoire, 1998-99*, Calverton, MD, ORC Macro.

REPUBLIQUE DE COTE-D'IVOIRE, INSTITUT NATIONAL DE LA STATISTIQUE (1999), *Profil de la pauvreté 1998*, Abidjan.

REPUBLIQUE DE COTE-D'IVOIRE, MINISTERE DE LA SANTE PUBLIQUE, DIRECTION EXECUTIVE DU PROGRAMME NATIONAL DE LA SANTE DE LA REPRODUCTION ET DE LA PLANIFICATION FAMILIALE (1999), *Programme national de la santé de la reproduction et de la planification familiale*, Abidjan.

RWENGE, M. (2000), "Comportements sexuels à risques parmi les jeunes de Bamenda, au Cameroun", *Perspectives Internationales pour le Planning Familial*, special issue, p. 13-18.

ZANOU, B., and A. NYANKAWINDEMERA (2002), "Comportements reproductifs chez les adolescents en Côte-d'Ivoire", in: A. Guillaume *et al.*, eds.*, Santé de la reproduction en Afrique*, ENSEA/FNUAP/IDR, p. 339-354.

ZANOU, B., *et al.* (2002), *Connaissance, attitudes et comportements en matière d'IST/VIH/SIDA chez les jeunes du milieu urbain en Côte-d'Ivoire*, Survey Report, USAID, ENSEA, Johns Hopkins, Abidjan.

Part IV

ACCESS TO AND QUALITY OF HEALTH SERVICES

7

WHY WOMEN CONTINUE TO DIE FROM CHILDBIRTH IN DHAKA, BANGLADESH

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1. Introduction

This paper focuses on the key issue of reproductive health, maternal mortality, and why some women do not get the care they require. It reports on this issue in the poorer parts of Dhaka City in Bangladesh, a country with a high estimated maternal mortality ratio and a very low proportion of childbirths attended by medically trained personnel, and, relatedly, a very low proportion of births in an appropriate health facility. The World Bank has estimated that skilled health staff attended only 14% of live births in the period 1998-99 (World Bank, 2002). Dhaka is above the national level in births attended by skilled staff, but, despite its much greater access to appropriate health facilities and trained personnel, its levels are still very low by international standards, and in the poorer areas of Dhaka the levels are little higher than in Bangladesh's rural areas.

After having been relatively neglected, maternal mortality has become an increasing health concern. The World Health Organization (WHO) launched "The Safe Motherhood Initiative" at an international

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conference in Nairobi, Kenya, in 1987 (Starrs, 1987). Maternal mortality was highlighted by the Program of Action of the 1994 International Conference for Population and Development which stated:

> "All countries, with the support of all sections of the international community, must expand the provision of maternal health services in the context of primary health care… All births should be assisted by trained persons, preferably nurses and midwives, but at least by trained birth attendants." (United Nations, 1995).

Public health resources had previously been focused on more easily preventable causes of death, particularly among children. Infant and child mortality rates were extremely high, and their reduction had a particularly great effect in improving life expectancy given the large number of years of life gained per infant life saved. Infant and child death rates were also known to be very sensitive to socio-economic development, being closely linked to the levels of infectious disease, malnutrition and parental care, and amenable to simple public health measures including immunisation, oral rehydration treatment (ORT), promotion of basic hygiene including the use of soap and, at a somewhat more advanced level, primary health care.

The exclusive focus on children's health has changed partly because of the very success of efforts to reduce early mortality, and partly as a result of concerns that a concentration on children's health has ignored the well-being of their mothers. There is now recognition that children's well-being is closely linked to the health of their mothers, and an increasing concern that the interests of women are generally neglected, especially their health. A key part of this focus on women's health has been on maternal mortality. Levels of maternal mortality are far higher in developing than in developed countries, to the point where in many poor countries it is a major cause of death, a situation that has not existed in developed countries for at least a century. The levels of mortality are highest on a regional basis in Africa, but, given the huge population of South Asia, the region in which Bangladesh is located, it is estimated that nearly half of all women who die of maternal mortality are there. Moreover, there is a special concern about maternal mortality in South Asia. South Asia is distinct among the world's regions in having higher mortality rates for females than males, the natural biological advantage of women in longevity failing to compensate for socio-cultural and other factors discriminating against them. Maternal mortality is only one factor in this, but the childbearing ages

are extreme in this characteristic, and for these ages maternal mortality is in South Asia the leading cause of death (Koenig *et al.*, 1988). It has been estimated for Bangladesh that in the late 1980s women had one chance in 35 of dying of a maternity-related cause during their lifetime (Koenig *et al.*, 1988; Maine *et al.*, 1996). The maternal-mortality rate (the number of deaths from causes related to pregnancy and childbirth per 100,000 women of reproductive age) is almost certainly falling as a result of a decline in the birth rate. The total fertility rate (TFR) fell from six to just over three during the course of the 1980s and early 1990s. However, trends in the maternal mortality ratio (the number of deaths from maternity-related causes per 100,000 births), which is not directly affected by high birth rates, are much less certain.

A major problem in determining maternal mortality rates and ratios is the weakness of the data. Because the denominator is very large for the numerator, estimates tend to be very imprecise and the most efficient indirect survey method, the sisterhood method, requires a large sample and a broad time span measuring at least a decade before the survey (Maine *et al.*, 1996). It has nevertheless been estimated that in 1995 Bangladesh had a maternal mortality ratio of 600 per 100,000. In comparison, most industrialised countries had ratios of less than 20, whereas some African countries had ratios of up to 2,000. Within South Asia, neighbouring India had a ratio of 440, Nepal 830, Pakistan 200 and Sri Lanka 60. These figures have to be regarded with scepticism; the figure for Pakistan, in particular, seems suspiciously low (World Bank, 2002). In this paper we will not explore this issue further, simply noting that maternal mortality is very high in Bangladesh, including Dhaka; and it examines some of the factors involved.

The 1987 World Health Organization's International Safe Motherhood Initiative was launched to reduce maternal mortality but, as Maine *et al.* (1996) note, progress has been slow, partly because of disagreement on the best approach. Initially it was hoped that the maternal mortality ratio could be reduced relatively simply by using a community-based approach similar to that which had proved so successful for infant and child mortality.

Many countries established maternal and child health (MCH) services including the provision of antenatal care (ANC) services to expectant mothers. Good ANC helps identify high-risk pregnancies for special attention including delivery by trained health professionals (Backett *et al.*, 1984). It also normally provides such assistance as iron

tablets to overcome anaemia, and tetanus toxoid immunisation for pregnant women (though this is mainly for the benefit of the infant). Postnatal care (PNC) may also be provided to reduce risks to mother and child following birth. In Bangladesh these services are delivered in rural areas by various fieldworkers including the family welfare visitor (FWV), an 18-month-trained paramedic who provides family planning and MCH services.

Nevertheless, such measures were not enough by themselves. In Bangladesh, for example, they do not effectively address the issue of malnutrition. A high proportion of Bangladeshi women are malnourished as is reflected in a very high rate of low birthweight babies. This situation reflects general undernourishment, a belief that women should wait until other family members have eaten, and above all a belief that restricted eating will lead to an easier birth.

Moreover, the WHO risk approach, while successful in identifying some cases needing extra care, has been found to lack specificity and sensitivity: for example, only a minority of cases of obstructed labour are predicted by obstetric history (Kasongo, 1984). The ideal solution to identifying difficult childbirths is to ensure that all childbirths receive medical attention either in a hospital or clinic, or by providing a cadre of medically trained personnel capable of providing appropriate delivery services, and of ensuring that the woman and child receive appropriate treatment in an emergency. Where the resources and personnel are not available the only alternatives are to provide training to the traditional birth attendants on good birth delivery procedures, and when to refer patients. This approach has met with mixed success. Common problems have included inadequate training of the traditional birth attendants (TBA), poor follow-up in training and a general lack of acceptance of the value of trained TBAs from the general community. In some countries, including Bangladesh, an attempt has been made to overcome community resistance by informing pregnant women and their carers about the danger signs to be watched for in a delivery to show when they should seek medical attention. However, there is little advantage in identifying high-risk pregnancies if appropriate facilities and services cannot be provided (Kessel, 1987).

Increasing evidence indicates that a reduction in maternal mortality requires access to a number of essential obstetric services. An influential study testing the effect of a community-based approach to reducing maternal mortality was conducted by Fauveau *et al.* (1991) in Matlab, using

the Demographic Surveillance System; Matlab, as Maine *et al.* (1996) pointed out, is one of the few places where an intervention into maternal mortality can be rigorously tested. Under this intervention nurse-midwives were placed in health subcentres and given the responsibility of providing prenatal, home delivery and postpartum care to women in their area, identifying pregnancy-related complications, treating them where possible, and referring others, organising referral and accompanying the women to the central Matlab clinic, and working with community health workers when they were needed (Maine *et al.*, 1996). The study apparently demonstrated that a community-based approach could work with a remarkable decline in maternal mortality from 440 to 140 per 100,000 live births in the intervention area, without a significant decline in the control area (Fauveau *et al.*, 1991; Maine *et al.*, 1996). Ronsmans *et al.* (1998) argue that the pattern is more complex than this and without the random allocation of interventions into treatment and intervention areas cannot be properly tested. Maine *et al.* (1996) accepted that the decline is meaningful but argued that the determinants by cause of death needed more examination. They argued that the original analysis placed too much emphasis on the community activities of the nurses and did not emphasise sufficiently their role in referral and the contribution of the hospital-based intervention.

WHO has defined as essential services, the capacity to perform Caesarean sections, administer anaesthesia, give blood transfusions, perform vacuum extractions, and perform vacuum aspirations for incomplete abortion (WHO, 1986; Kessel, 1987). It also recommended facilities for inserting intrauterine devices and performing surgical sterilization to prevent dangerous pregnancies and reduce the overall number of pregnancies a women bears. In addition there should be provision for the manual removal of placentas.

For many countries, the provision of such services has been extremely slow, either because governments lacked commitment, or because they have lacked the necessary resources to provide such sophisticated services.

The paper examines the provision of maternal health services such as ANC and delivery services in Dhaka. The paper is divided into three parts: first, an examination of the overall situation in Bangladesh using findings from the 1999/2000 Bangladesh Demographic and Health Survey (BDHS) regarding some of the main factors that influence maternal mortality such as ANC services and delivery services; the second

part examines the situation using quantitative data from a study conducted by the author and colleagues in the poorer areas of Dhaka City to examine the same issues; the third part draws on qualitative data from detailed interviews, which help to explain the quantitative findings in terms of people's lived experience.

2. ANC services in Bangladesh

In Bangladesh ANC services may be provided by a doctor, a nurse/midwife or a paramedic. The latter in rural areas is usually a government female field worker, the family welfare visitor (FWV), an eighteen-month-trained paramedic. The FWV is based, along with a medical assistant (usually a male), in a local Union Health and Family Welfare Centre (UHFWC) where she provides advice on family planning, inserts IUDs, undertakes menstrual regulation (pregnancy termination before ten weeks of gestation), as well as ANC. In urban areas the FWV's role is sometimes taken by NGO provided nurse-midwives or paramedics, but more often antenatal care services are provided by doctors, who may be government, private or NGO.

According to the 1999-2000 Bangladesh Demographic and Health Survey (BDHS), for births in the preceding five years, 63% received no antenatal care (see Table 1). Urban women were much more likely to receive ANC with "only" 38% receiving no ANC. Rural levels of ANC were much lower with 68% having received no ANC. ANC was also strongly associated with education and low birth order. Even when women have received ANC the average number of visits is well below the recommended level of once a month and more frequently near term, adding up to roughly twelve visits. This number may be excessive in the context of a developing country. A more realistic minimal number may be four appropriately timed visits, so it is of concern that only 10% of women had four or more ANC visits.

One of the main purposes of ANC is to detect and monitor complications during pregnancy. While 37% of women said they had received ANC, many had not received the full range of services and, worryingly where most births take place without trained attendants, less than half of these women (16% of the total) were informed of the signs of pregnancy complication (see Table 2). Women who received

Table 1
ANC provision by source[a]

	Doctor	Nurse/ mid-wife/ paramedic	Other	No one	Missing	Number
Residence						
Urban	49.9	8.7	3.6	37.7	0.2	913
Rural	18.2	9.8	3.6	68.3	0.1	4,351
Mother's education						
No education	11.5	8.5	2.9	76.9	0.1	2,389
Primary incomplete	18.7	10.4	4.0	66.8	0.1	990
Primary complete	22.9	10.7	4.6	61.5	0.3	543
Secondary +	49.5	10.5	4.1	35.9	0.0	1,342
Birth order						
1	32.7	11.7	3.5	52.1	0.0	1,437
2-3	24.8	10.6	4.4	60.1	0.1	2,286
4-5	15.9	7.0	3.0	74.0	0.0	928
6+	10.6	4.8	1.8	82.1	0.6	612
Total	23.7	9.6	3.6	63.0	0.1	5,263

Source: 1999-2000 BDHS (Mitra *et al.*, 2001, p. 112).
a. Percent distribution of last births in the five years preceding the survey by source of antenatal care during pregnancy.

Table 2
Components of ANC[a]

	Urban	Rural	Total
Received any ANC	62.3	31.7	37.0
Weighed	59.9	30.2	35.3
Height measured	47.6	23.1	27.4
Eyes tested	27.7	14.1	16.4
Blood pressure measured	47.5	25.0	28.9
Urine sample given	39.5	14.9	19.2
Blood sample measured	34.9	11.7	15.7
Received iron tablets	50.0	33.5	36.4
Informed signs of pregnancy	27.5	13.5	15.9
Number	913	4,351	5,263

Source: 1999-2000 BDHS (Mitra *et al.*, 2001, p. 112).
a. Percent distribution of last births in the five years preceding the survey for which mothers received specific ANC services.

ANC were much more likely to receive the full range of checks and services in urban Bangladesh than in rural areas.

3. Delivery care

To reduce maternal mortality to near the very low levels in industrialised countries requires that deliveries, and especially complicated cases, are under medical supervision, with access to medical facilities, ideally in a hospital. The 1999-2000 BDHS recorded that 12% of births in the preceding five years involved assistance by trained medical personnel (see Table 3). A further 10% involved a trained TBA; the train-

Table 3
Assistance during delivery[a]

	Doctor	Nurse/ mid-wife/ paramedic	Trained TBA	Untrained TBA	Relative/ Other	No one	DK	N
Residence								
Urban	21.2	11.8	9.4	42.1	14.2	0.9	0.4	1,142
Rural	4.3	3.7	9.7	56.3	24.0	1.7	0.2	5,797
Mother's education								
No education	2.6	2.8	8.9	57.8	25.4	2.4	0.2	3,286
Primary incomplete	3.4	4.2	9.1	57.8	23.6	1.5	0.4	1,290
Primary complete	4.5	4.5	10.0	56.8	23.5	0.5	0.2	721
Secondary+	20.0	10.4	11.8	41.9	15.2	0.6	0.2	1,642
Birth order								
1	13.6	6.6	11.4	49.5	18.2	0.6	0.1	1,437
2-3	7.5	5.2	9.9	52.4	23.9	1.1	0.2	3,252
4-5	3.0	4.5	9.0	57.9	22.7	2.5	0.3	1,348
6+	1.2	2.8	7.4	60.8	23.5	3.7	0.6	902
ANC visits								
0	1.5	2.7	7.9	60.6	25.3	1.9	0.1	4,482
1-3	8.5	7.5	13.8	48.5	20.3	1.2	0.2	1,780
4+	40.3	14.4	11.0	24.1	9.0	0.6	0.7	660
Total	7.1	5.0	9.7	54.0	22.4	1.6	0.2	6,939

Source: 1999-2000 BDHS (Mitra *et al.*, 2001, p. 118).
a. Percent distribution of last births in the five years preceding the survey by type of assistance during delivery.

ing involved can only be described as minimal. The likelihood of having a medically trained attendant is much higher in urban (33%) than rural areas (8%). It is also strongly associated with education, birth order and number of antenatal visits.

The proportion of babies born in a health facility is lower still (see Table 4). In the preceding five years, for all Bangladesh, only 8% were born in a health facility: in urban areas, 25%, but in rural areas 5%. Use of a health facility was strongly associated with higher education, low birth order, and ANC visits.

Table 4
Place of delivery[a]

	Health facility	At home	DK/missing	Number
Residence				
Urban	25.1	74.2	0.7	1,142
Rural	4.6	95.1	0.4	5,797
Mother's education				
No education	3.1	96.6	0.4	3,286
Primary incomplete	4.7	94.6	0.7	1,290
Primary complete	5.3	94.5	0.2	721
Secondary +	21.4	78.2	0.4	1,642
Birth order				
1	14.4	85.4	0.2	1,437
2-3	8.4	91.1	0.4	3,252
4-5	4.1	95.5	0.4	1,348
6 +	1.6	97.7	0.7	902
ANC visits				
0	1.6	98.2	0.2	4,482
1-3	10.3	89.3	0.4	1,780
4+	44.2	54.6	1.1	660
Total	7.9	91.6	0.4	6,939

Source: 1999-2000 BDHS (Mitra *et al.*, 2001, p. 112).
a. Percent distribution of last births in the five years preceding the survey by place of delivery.

Assuming that 20 to 25% of births may need some kind of medical intervention, these data indicate that many women are not getting the attention they need; particularly rural women and less educated women, and if the figures were available, almost certainly poorer

women. These categories to some extent overlap but each contributes to the failure of the women to get the attention they need. Even for population categories that approach the "ideal" number of medically assisted deliveries that we have somewhat arbitrarily chosen, this figure is only meaningful if those requiring more advanced medical assistance are indeed the ones receiving it. The evidence is that this is true only to a limited degree. The explanation for the association of ANC visits with delivery by medically qualified personnel, and in a health facility, is probably not that those found to be at risk of a difficult delivery are referred by the ANC provider to an appropriate clinic, but that those who go to ANC are also likely to choose on their own account to use a medically trained person, or to deliver in a health facility.

That this is the case is indicated by the very low proportion of births that involve complicated procedures, well below the proportions prevailing in wealthier countries. For example, only 2.4% of all births were by Caesarean section, well below the levels regarded as necessary to meet emergency requirements, and far below the "elevated" level of industrialised countries, where many Caesareans are believed to be unnecessary. In rural areas the figure is only 1.3% and is even lower for women with no education and women with higher-order births. There is some overlap in these categories, but it is indicative that geographical access to health facilities, and the socio-economic characteristics of the women, are both important. First births form a higher proportion of births of high socio-economic-status women, but it is also true that they may be more likely to require intervention. While Caesarean rates are higher for urban and more educated women they remain well below the expected figure, indicating that many of these women are failing to get the treatment they need. The urban women who are not getting adequate treatment are likely to be those who are poorer and less educated, while the educated women who do not get services are likely to be mostly rural or in smaller towns without access to appropriate health services.

This paper is concentrating on the poor of Dhaka; as this city has the most health facilities and doctors in the country, why do the poor not use the resources available? First to be examined are the writings of Therese Blanchet (1984) about beliefs and practices concerning childbirth. While Blanchet was describing rural Bangladesh her findings are relevant to urban Bangladesh, if only because many urban Bangladeshis are rural migrants. Blanchet was concerned with how the beliefs of the

rural population, and especially rural women, affected their child delivery practices. She argued that childbirth in rural Bangladesh belongs to a woman's realm from which men are to some degree excluded: one effect of this is to isolate concepts of childbirth from Islamic belief, the effect of Islamic teachings being primarily on men. Islamic teachings are given principally in the mosques, which are attended exclusively by men. The beliefs of the village women on childbirth are an amalgam of Islamic, Hindu and particularly earlier pre-Hindu beliefs. Islamic concepts of *purdah* combine with Hindu concepts of pollution and pre-Hindu notions of vengeful spirits (*bhut*) to limit the movement of women. For the protection of the mother and child it is best to avoid any action that might bring about pollution and make her vulnerable to the attentions of the *bhut*. This could be done most effectively by obeying notions of *purdah*, as practised in Bangladesh, and staying at home during pregnancy and childbirth. This not only ruled out the need for doctors, but also discouraged the use of external medical facilities, and especially discouraged receiving attention from male health providers, even though most doctors in rural Bangladesh are males.

While emphasising amalgam of beliefs, Blanchet stressed that there were important differences in interpretation between Hindus and Muslims. Among Hindus, a caste specialist, the midwife, can remove the spiritual pollution associated with childbirth. The Muslims, without an equivalent caste system, do not share this belief, an equivalent role being taken in some, but not all cases, by older women, usually known to the woman, and often a relative. This means that whereas a *dai* or traditional birth attendant (TBA) is a professional among Hindus, she is not amongst Muslims among whom most TBAs have delivered relatively few babies. Significantly among Muslims there is a strong belief that a woman should not receive payment for service. The few TBAs who do deliver babies on a more professional basis for payment do so out of necessity and have very low prestige. This means that, while among the Hindus there is a group who can be easily identified and given training, there is no equivalent amongst Muslims. When TBAs are selected for training they are often high-prestige women with little experience or interest in delivering many babies.

4. ANC and delivery practices among the urban poor in Dhaka

4.1. Method

In 1999 a survey was conducted of four *bosties*[2] and four poor non-*bostie* areas broadly representative of the poorer sections of the city. The sample yielded interviews with 911 *bostie* households and 914 poor households, a total of 1,825 slum households and 8,429 persons, giving an average of 4.6 persons per household (see Caldwell *et al.,* 2001). Of 1,809 ever-married women aged 15-49 interviewed, 923 (52%) said they had given birth in the preceding five years. These women were asked additional questions concerning antenatal treatment at the last birth. In addition a micro study was conducted of two random samples of the ever-married women. The first sample was of women who at last birth had been attended by a trained health professional, and the second of women who had not. The women were asked a series of questions concerning the circumstances of the birth, and the context and related decision-making process concerning the birth, and the use or otherwise of a medical professional. The interviewers were given a series of key issues about which the respondents were to be questioned, but they were trained to encourage the respondents to give their accounts in a form as close as possible to a narrative. The degree to which this occurred depended on the skill of the interviewer and particularly on the openness of the respondents to the interviewing process. An additional survey was undertaken of a number of the *dais*, the traditional birth attendants working in the areas, and whom the respondents had used.

4.2. Findings: ANC

Of the women who had given birth in the preceding five years, 513 (56%) said they had a medical checkup when they were last pregnant. The figure was much higher in the poor areas (74%) than in the *bosties* (40%). The poor area is above the BDHS figure for urban areas (62%), but is probably fairly representative of Dhaka. The *bostie* figure is closer to the rural figure of 32%. Within the *bosties* and the poor ar-

2. *Bosties* are illegal settlements marked by their poverty, temporary housing, lack of government services, and generally squalid living conditions.

eas women were much more likely to have sought ANC, if they were educated, lived in a well-off household as measured by a "basket of goods",[3] and were born in Dhaka, all categories which are closely related. The evidence from these data and the in-depth study suggest that pregnancy is perceived to be a natural phenomenon not requiring intervention unless there is something clearly wrong. Of particular note is the strong independent effect of education and migrant status on ANC visits. Women who are not educated and who have migrated from rural areas are substantially less likely to have been medically checked, probably because they see less need and perhaps also because they are less comfortable in dealing with medical professionals. There is also some evidence in the in-depth survey that many of these women returned to their home villages so they could be with their families for the birth.

When asked who had examined them during pregnancy the great majority in both *bosties* (78%) and poor areas (86%) reported that a doctor had done so. In most cases, the examination took place in a maternal and child health centre, an NGO clinic or a private clinic. There was tremendous variation of clinic type by the precise locality, evidently reflecting the availability of particular services offered by clinics. Two areas were close to a Maternal and Child Welfare Centre (MCWC), and three areas were close to an NGO clinic; this may partly explain the high usage of doctors.

The respondents were asked specifically about the various checkups conducted. Women from *bosties* who had an ANC checkup were less likely to have been checked for individual items such as weight, height, blood pressure, eyes, blood and urine. Combined with the fact that they were less likely to have had any ANC checkup overall, *bostie* women were much less likely to have been checked for any individual item. In general the data for *bostie* women resembled BDHS data for rural rather than urban women. Poor-area figures were comparable with those for urban areas.

Health workers in Bangladesh are often reluctant to touch their patients, particularly when the provider is a male and the patient is female, partly, because the patients themselves are uncomfortable with

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3. This index was compiled by giving one point each to the household possession of the following items: (1) TV, (2) radio, (3) clock or watch, (4) table, chair or bench, (6) bed, (7) *almirah* (wardrobe), or (8) cycle-rickshaw.

this. A specific question was asked about whether there had been a physical examination. Of the 512 women who had received ANC, 128, or exactly one-quarter, had a physical examination, including 24 (12%) of the 200 women in the *bosties* and 104 (33%) of the 312 women in the poor areas. This was equivalent to 14% of all women, or 5% of women in *bosties*, and 24% of women in poor areas. Interestingly there was more likely to have been a physical examination if a doctor had conducted the ANC than if a nurse had, even though doctors were mostly males. This was presumably because doctors were more likely to examine serious cases. Of the 128 women who had a physical examination, 13 were told that something was wrong, 7 were told that the baby's position was abnormal, 2 that the baby was not moving, 2 that the baby was large, one that she had high blood pressure, and another that she had anaemia.

4.3. Child delivery

In only a minority of cases (19%) was the main person to conduct the delivery medically trained. As with ANC the level was much lower in the *bosties* (12%) than in the poor areas (28%) (Table 5).

Table 5
Assistance during delivery

Residence	Medically trained doctor/nurse/ mid-wife/paramedic	Trained TBA	Untrained TBA	Relative/ Other	No one	N
Bostie	11.8	7.8	62.2	11.4	4.0	500
Poor area	28.5	16.6	48.5	7.8	0.5	421
Total	19.5	11.8	55.9	7.9	2.4	921

Source: Access to Health and Reproductive Health Services Survey.

There is a low rate of medically trained attendance in both areas but particularly in the *bosties* being little above the equivalent figure reported by the BDHS for rural Bangladesh (8%) and far below the urban figure (33%). Furthermore, assuming that the proportion of critical cases requiring medical supervision is 20 to 25% in the poor

area, the figure is high enough to cover these cases, though in reality many of those getting attention will not be critical cases. The *bostie* figure, however, suggests that many female residents are not getting the attention they need. This indicates that the low use of medical professionals for deliveries is not simply a matter of physical access, since if people truly needed a medical professional one could be much more easily reached than in the countryside.

Nevertheless, there were significant differences by locality among both *bosties* and poor areas, indicating perhaps that proximity to available services is important, and also that specific neighbourhood programs may be important: for example in one poor area 44% of births were attended by a doctor, and 7% by a nurse, meaning that half of all births were medically assisted, apparently because of the presence of an MCWC. This was also the area to have the highest ANC usage.

Other variables to have a significant independent effect were household possessions, suggesting that affordability is a significant factor, and migrant status: whether the household had migrated from a rural area (see Table 6). Education was a smaller factor in the cross-tabulations and in multivariate analysis. Perhaps the major factor preventing use of modern attendants was not that traditional beliefs were inconsistent with or opposed to the use of health professionals, but simply that people were not convinced of the value of using them. On

Table 6
Health professional attended births (%)
by selected characteristics of mothers

	Bostie	Poor area	Total
Ever been to school			
No	13.5	21.4	16.1
Yes	10.3	33.2	24.0
Migrant household			
Yes	11.6	19.0	14.4
No	13.3	38.7	27.8
Household possessions			
Very poor	14.3	7.8	12.6
Better off	7.9	37.9	28.1

Source: Access to Health and Reproductive Health Services Survey.

this reading, the major effect of migrant status may be less that indigenous rural notions affect the use of health professionals, than the practical issues that migrant families are likely to be uncomfortable in using health professionals and being poor will choose the cheaper option; also some women prefer to return to their natal home for delivery. The health system is not geared to providing obstetric services within hospitals, and outside skilled delivery services are generally *ad hoc* depending on the programs often initiated by local NGOs. Only women from wealthier families who could afford private clinics would normally have a medical professional attending a delivery. The critical issue in these circumstances is whether in the case of a difficult delivery a woman receives medical attention when needed.

When the respondents were asked why they did not use a trained medical professional at the birth 86% said that there was no need, while 28% said that it was too expensive (more than one response was allowed). Much less common reasons included "none was available", "did not like to use", and "husband did not like". The likelihood of their saying there was no need differed little by characteristic, but respondents in *bosties* and with few possessions were more likely to cite financial problems.

4.4. Places of delivery

Closely related to the person conducting the delivery is the place of delivery. The proportion of deliveries by a medically qualified person is linked to the low proportion occurring in hospitals where doctors normally work. The reasons for this are similar to those given for not obtaining a trained health provider, that is a lack of perceived need, and cost; but there was also a positive preference for giving birth at home and a strong dislike and distrust of hospitals, where individuals feel they are treated poorly and where they have little control; this point is examined in more detail below (Table 7). In the previous five years 88% of last births had been at home (64% in the respondent's own house and 24% in another house). In *bosties* the figure was 95% and in the poor areas 79%. The remaining births were in public hospitals (5%) and, particularly in the poor areas, in maternal and child welfare clinics (3%) and private clinics (4%). The MCWC figure was strongly inflated by the one area in close proximity to an MCWC. Similar but slightly weaker associations with use of medical facility were

found with birthplace, with immigrant status, number of household possessions, and, to a lesser extent, education (Table 8). As with the person attending the delivery the major reasons given for not having an institutional delivery were "no need" (81%) and "financial problems" (22% – more than one reason allowed). Financial problems were stressed more in the *bosties* (27% versus 17%) and among poorer households. Other reasons given included "no-one or no family member to accompany the patient" (5%), "lack of knowledge" (5%), "did not know where to go" (2%) and "transport problems and distance" (2%).

Table 7
Place of delivery (%)

Residence	Public hospital	MCWC	Private clinic	Own home	Other home	N
Bostie	3.4	0.6	0.6	70.0	24.9	500
Poor area	7.9	5.2	7.1	55.7	23.8	421
Total	5.4	2.7	3.6	63.4	24.4	921

Source: Access to Health and Reproductive Health Services Survey.

Table 8
Use of medical facility for birth
by selected characteristics of mothers (%)

	Bostie	Poor area	Total
Ever been to school			
No	4.5	12.0	6.9
Yes	4.9	24.9	17.0
Migrant household			
Yes	3.6	13.3	7.2
No	6.8	27.2	18.5
Household possessions			
Very poor	5.2	5.1	5.2
Better off	2.3	27.0	18.9

Source: Access to Health and Reproductive Health Services Survey.

4.5. Treatment of delivery complications

A critical question, however, is whether those in need of assistance from a medical professional are getting it. Of the 13 women who were told at a medical checkup during pregnancy that something was wrong, five had their child delivered by a doctor, three by a nurse and one by a trained TBA. The respondents were asked whether they had suffered from any of four conditions associated with a problematic delivery: regular contractions lasting more than 12 hours, excessive bleeding that the respondent feared to be life-threatening, a malodorous vaginal discharge, and convulsions not caused by fever. Just over one-third (37%) of respondents said they had one of these conditions. They appeared to be a little less likely to report these conditions if they lived in an area reporting higher ANC use and hospital attendance.

A slightly higher proportion of these women said that they had a medically trained person at their delivery, including trained TBAs (43% versus 35%). This implies that such assistance was sought in some cases when a difficulty occurred. Nevertheless, it meant that most mothers with such conditions either did not seek assistance or did not do so in time for the birth. About 37% of women with difficult deliveries said they sought medical help either during the delivery or subsequently. The likelihood of doing so was higher in the poor area (45%) than in the *bosties* (31%).

Much of the treatment was, especially in the *bosties*, fairly minor. Of the 129 women to seek treatment 27 (21%) received various syrups, capsules or tablets (including iron tablets). Another 9 (7%) obtained *kobiraj* (traditional medicine) treatment and 3 homoeopathy (2%). Fifty (39%) received injections, though their nature was not specified. Seventeen (13%) women had a Caesarean, 12 (17%) in the poor area, and 5 (9%) in the *bosties*. An additional 2 (3%) women from the poor areas had unspecified surgery. The main sources of treatment were private doctors (47%); other significant sources were public hospitals (16%), pharmacies (16%), fieldworkers (28%) and traditional doctors (5%).

The *bostie* women were more likely to use traditional doctors (11% versus 5%) and pharmacies (26% versus 8%). Poorer households in Dhaka rely for much of their health care on pharmacies (Mookherji *et al.,* 1996; Caldwell *et al.,* 2001). In contrast the poor areas are somewhat more likely than the *bosties* to use private doctors (54% versus 39%) and, more surprisingly, fieldworkers (36% versus 18%). This latter fig-

ure varies strongly by locality and is apparently related to specific programs run by local NGOs.

The data suggest that many women, especially women in the *bosties* who in a wider sense represent poorer women living in unserviced neighbourhoods, are not getting the services they require. Clearly most women survive, and indeed our sample by definition is one of survivors. Nevertheless, they are running a risk. As noted, 12 women in the poor area had a Caesarean and 5 in the *bosties*. This is equivalent to 2.8% of pregnant women in the poor area and 1.0% in the *bosties*, levels well below those recommended, suggesting that many women, especially the more disadvantaged, are not getting urgently required treatment.

5. Qualitative results

The previous section examined the use of maternal health services by the respondent's characteristics using quantitative data, noting the very low rates of the attendance of health professionals at childbirth, especially among those living in *bosties*, the poor and rural-urban migrants. There was significant variation by individual neighbourhoods indicating that local programs of NGOs and public hospitals had a major effect on the services used. Use of hospitals for delivery was even lower. The next section examines the reasons the respondents gave for their use of the services using qualitative data from in-depth interviews. This analysis combines the discussions on trained attendants and place of delivery, given the close association involved since doctors in particular usually attend births only in hospitals.

5.1. Factors discouraging the use of trained attendants

The major reason given for the low use of health professionals and of hospitals was that it was not necessary, a revealing but broad answer. It implies that people are not convinced of the value of trained attendants or institutional delivery at least for normal deliveries. It reflects a strong societal preference for births at home and the perhaps related fact that there is little institutional capacity to handle more than exceptional cases. The key issue, however, is whether these women who need trained birth assistance are seeking and receiving it.

Of the 37% of the respondents who said there had been complications most had not sought or obtained a trained provider in time for the birth. A high proportion of these cases reported that trained attention had not proved to be necessary. But it was clear from the qualitative data that the real situation was more complex.

As noted, detailed questions were asked of two random samples of 40 respondents each, one whose deliveries had been managed by a medically trained person, and a second sample whose deliveries had not. The two groups are not directly comparable, as a high proportion of the former had medically trained attendants because they had complicated deliveries. The second group therefore inevitably has a higher proportion of uncomplicated pregnancies and deliveries. Nevertheless, the transcripts indicate many cases where the decision as to whether to seek a trained provider was influenced not just by the seriousness of the case but also by other factors.

Very few of the respondents would have gone to a hospital for childbirth if they had not experienced difficulties in their pregnancy, or in a previous pregnancy. A very strong preference was expressed for delivery at home over hospital delivery. Given that hospital is where doctors normally conduct deliveries this largely ruled them out as birth attendants in normal circumstances. As in the quantitative survey, a major reason given by the in-depth survey respondents for disliking hospitals is cost.

5.2. Nothing happens without money

Many of the respondents emphasised the costs of hospitals, which they contrasted to the cheapness of using a *dai*. Rokeya[4] (Respondent 61) noted that the *dai* cost her only 180 taka (US$3) and a piece of cloth. Rahima (Respondent 49) spent somewhat more on a nurse, 1,200 taka (US$20). In contrast several respondents complained of spending many thousands of taka on a hospital delivery, though the costs clearly varied greatly by whether the delivery involved complications.

Even quite small amounts of money can cause difficulties because people have little ready cash at hand. Momen (Respondent 27) noted that she received treatment at a maternity hospital because her baby

4. Pseudonyms are used for the respondents.

was in the wrong position. The hospital asked for 400 taka (US$6.67) for treatment, money she raised by selling her dresses. She did not use the hospital for delivery, commenting:

> "If I had a complication, then I might go to hospital, but I did not have a problem. Besides you know, hospitals want money. Even public hospitals demand money. Nothing happens without money here!".

A rare contrary position was put by Parvin (Respondent 56) who said that the maternity hospital charged only 120 taka (US$2) for two days "seat charge", which, she noted, was a very small sum.

Public hospitals are heavily state-subsidised, and in theory many of their services are provided at token cost. In practice hospitals are often short of essential supplies and have to charge for these items. In addition, the respondents imply that doctors and other staff are trying to make money out of them, though it is possible that this view may reflect a lack of understanding of the true costs involved. Concerns about cost are particularly great where major surgery is concerned. Sahera (Respondent 51) claimed that her Caesarean had cost 24,000 taka (US$400) a huge amount of money by Bangladeshi standards, and that her father had to sell his land to pay for it. Tara (Respondent 15) said she had two Caesareans, the first costing 20,000 taka, and the second 9,000 taka. The first child had died. Shajeda (Respondent 16) commented that the hospital had demanded 10,000 taka before carrying out her Caesarean. Her parents-in-law paid, but took her home six hours after the operation in case they were charged more. A factor that seemed to add to their stress is that many did not appear convinced of the need for the operation, suspecting that the doctors were simply trying to make money. Mina (Respondent 20) commented that she had been to one doctor who had demanded money to conduct a Caesarean. In response her husband took her to another clinic where the doctor said it was not necessary. Clearly, whether such an operation is necessary depends to a great degree on the judgement of the doctor. The degree to which people accept this judgement and any legitimate associated expense depends both on their ability to pay and their trust in the doctors. This latter seems to be low partly perhaps because many people use doctors only in an emergency, and hence there is little sense of a trusted family doctor.

5.3. The value of medically assisted deliveries

Even where major surgery was not involved people were still concerned about costs, not being convinced of the value of going to the hospital or of the doctor's role. A good deal relates to the points made by Blanchet (1984) that people still retain many older beliefs about the factors that endanger pregnant women, and how to protect them. According to these indigenous beliefs "proper" behaviour, by the women, and treatment by the indigenous healer, the *kobiraj,* can provide protection and adequate treatment, not a Western-trained doctor. Many respondents expressed concern about *alga batas*, a term that literally means "bad air" but is used to refer to the effects of bad spirits known in Bangla as *bhut.* Pakhi (Respondent 48) noted that she had fallen down while pregnant, and had received treatment from the *kobiraj* to protect the baby. Later, after the birth, the child suffered from the influence of bad spirits. The child died, but she commented that there would have been no use in consulting a doctor because this is not an area in which doctors have expertise. She is now wearing an amulet to protect her next pregnancy. Roushan (Respondent 60) reported that she had experienced a series of miscarriages due to evil spirits. To ensure that she had a live baby she went to a *fakir* who foretold that she would have a baby. She subsequently went to a female *kobiraj* (*kobiraji*) who gave her three medicines to take on three successive mornings on an empty stomach while standing in a pond. She soon became pregnant. When she was nearing the birth the *kobiraj* gave her medicine to deter evil spirits. Given the problems she had suffered, when she had labour pains, the respondent went to the hospital for delivery. The hospital doctors gave her saline and two injections after which the baby was born. She commented that she only used the hospital because of the dangers involved and otherwise it was better to use a *dai,* as they were cheaper, the hospital requiring bribes. The hospital in her case demanded 5,000 taka (US$83), an amount that took her family two to three months to pay off. She had not used a *dai* at any stage because she said her membrane had not broken, and therefore there was no need.

I have quoted these two respondents at length because they bring out some important points. The respondents are reluctant to use the hospitals because they are expensive, unfriendly and do not accord with their ideas of disease causation. In the last case, and in some of the ear-

lier examples quoted, the hospital had been used, initially as an act of desperation, and to this degree the hospitals' skills may be said to be recognised. Nevertheless, clearly a lack of understanding and high cost discourages people from using hospitals. This adds to perceptions that doctors and other hospital staff are remote, rude and even grasping.

Halima (Respondent 18) commented that she did not use a doctor because she was scared of what they might do. She had accompanied a woman to hospital for a menstrual regulation (early abortion by vacuum aspiration). The doctor had treated the woman like a cow placing her legs on two sides while doing the MR. Seeing this she decided she did not want to be treated this way. She went back to her village because her mother, sisters-in-law, sisters and brothers were there to look after her. At the moment of birth there was no one with her, and she did not call anyone. She delivered the child herself though she was very afraid that she might die. Her previous child had died, so soon after birth she made a hole in the baby's ear and placed a protective earring in it. Sharmin (Respondent 57) said her mother told her not to go to a doctor because the doctor used medicine which is harmful to the mother. Another point that is particularly clear in the previous example, though it is also present in the last, is that people may be driven less by concerns over the mother's health than over the child's, in this case following a history of miscarriage. The women themselves prefer to have their children at home if possible.

A reluctance to accept the importance of the doctor's skills may be related to the very low emphasis given the skills of the doctor's indigenous equivalent, the *dai* or traditional birth attendant. The emphasis particularly in the last case quoted was on the skill of the *kobiraj* rather than of the *dai*. Blanchet notes in this regard that the *dais* tend to emphasise the physicality of what they do, whereas the more respectable *kobiraj* seldom touch the body. The *dais* in this survey emphasised the physicality of what they did, almost delighting in describing how physically demanding their work was in manipulating the belly to reposition the child, and particularly during the childbirth itself almost as though they brought the child out themselves without the mother's involvement. The doctors are in a sense caught in this cultural dichotomy. They too try to claim the social superiority traditionally associated with the *kobiraj* but their work requires them to deal with the physical body. One consequence is that most doctors rarely touch the body, making diagnoses on the basis of a statement of the patient or even a relative

of the patient, a tendency exacerbated by feelings about female modesty. This may contribute to a feeling that assisting at a normal childbirth is not truly the doctor's job.

In a number of births outside the hospital the main role of the doctor has been to induce the birth with an injection when it has been delayed, but the physical birth itself is handled by a *dai* or nurse. Rokeya (Respondent 61) said that in her case the *dai* called in the doctor to induce the baby, but the *dai* delivered it. Pakhi (Respondent 48) similarly said her *dai* called in a doctor to induce the delivery. When nothing happened, the doctor sent her to a hospital.

5.4. Disruption to family roles

Reluctance to use hospitals, however, is not only related to concerns about cost and a lack of acceptance or understanding of doctor's skills. It also relates to the disruption to traditional family and gender roles involved; as noted, these are strongly differentiated in Bangladesh. Women have very specific roles as mothers and wives, in raising children, food processing and cooking, all tasks carried out in and around the house. Women are often discouraged from earning incomes outside the house. There is strong opposition to men undertaking what are seen as women's jobs, and women undertaking what are seen as men's. These attitudes were associated and reinforced by the institution of *purdah* in which it is shameful for a woman to be seen by men, at least non-family members. To some extent this is beginning to change, especially in urban Bangladesh where new occupations are open to women, such as work in garment factories; and where increasing female education brings with it a desire for appropriate employment. Nevertheless, the old attitudes are still strong. For a woman to give birth in hospital means being taken out of her household, and disrupting her work and arguably interfering with her family responsibilities. Sharmin (Respondent 57) commented:

> "I decided to have all my babies at home. My mother and sister can stay with me at home. No one would be allowed to stay at hospital. Besides I can do any household work at home". She added, "Who would take care of my children?"

The maternity said they would do so, but she preferred to give birth at home with the help of a nurse.

A number of respondents particularly emphasised the greater attention received when giving birth at home. Momen (Respondent 27) commented:

> "My baby was delivered by my mother in my home. My mother is a *dai* and is very experienced and besides I feel comfortable at home. It is my own environment, I feel easy here. I hadn't any problem so my mother was appropriate".

Jahanara (Respondent 21) remarked:

> "Doctors and nurses do not care well, but in my house my mother always looks after me well".

To give birth in a hospital is also taking a woman away from those closest and providing greatest emotional support, including her husband and children, but very importantly other women in the family such as her mother, mother-in-law and sisters-in-law. Added to this is the breaking of *purdah* and the shame associated with going to the hospital. *Purdah* is weaker in urban than rural areas, but nevertheless concepts of female shame are very strong. The respondents expressed very strong concerns about being seen undressed by any outsiders but particularly by men; as Najmen (Respondent 59) commented, she delivered her last child herself without assistance because she was too "shy" to tell anyone, not even her sisters-in-law who were senior to her. Fatema (Respondent 14) said her first baby had died and she had gone to a leading hospital on the recommendation of her doctor, who said that it was cheap, and that it had lady doctors. One of these had then suggested that she use her private clinic, which was more convenient. In all she paid 9,000 taka but she apparently regarded this as reasonable given the circumstances. While *purdah* may be weaker in the cities than in the rural areas, the issue of family roles may in some ways be worse. In the villages many people live in close proximity providing support to each other in emergencies. In the town, especially in the *bosties*, houses are small and nuclear families are generally the norm, with relatives, if not back in the village, at least at some distance. This meant both that it was more difficult for a woman to undertake her own responsibilities, and also that it was more difficult for others to look after her. Safeda (Respondent 26), a village migrant, commented that she had gone back to her village to have her last child:

> "I had to go there because there was no one to look after me at that time in Dhaka. My mother had to look after her family, so she could not come here to attend me".

She added that giving birth in the village made it impossible to deliver in a hospital as none were nearby. Similarly Halima (Respondent 18) commented that she went to the village because there was no one in the city to look after her properly. Najmen (Respondent 59) noted that childbirth at home with a *dai* is preferable because, apart from being cheap, it is much easier for people to visit you. There is a recurrent theme through many of the interviews that the hospital environment is alien, isolated and confronting.

Another factor that discourages use of hospitals and doctors is simply one of convenience; hospitals and doctors are often very difficult to use or approach. As noted, hospitals are more accessible in the cities, but for most people who have limited access to transport, they are not particularly convenient to use.

Najmen (Respondent 59) commented that she had to go to the hospital during her pregnancy because she couldn't pass urine and stools. She had been advised to have her child in the hospital, but "when the pain started there was nobody to help me or to take me to hospital". A *dai* delivered the baby, but the *dai* was not skilled and could not deliver the baby properly. The baby died after three months.

In theory, people could use doctors outside hospitals, but in general they rarely do so: most such deliveries that involved a medically trained attendant were attended by a nurse/midwife. Doctors are reluctant to conduct deliveries away from appropriate facilities, and it may not be a good use of their skills anyway. Also some factors that make people reluctant to use doctors in hospitals also apply to doctors outside, even if to a lesser degree. Other medically trained people too are often reluctant to attend deliveries, particularly at inconvenient times. Safeda (Respondent 26) commented that she had her child in the village, noting that,

> "in the village, doctors do not have a suitable place for delivery. They have to be called to houses, and they did not come to our house. In my case my father and brother went to fetch the doctor, but it was night and the doctor refused to come, so I had my delivery with the help of the *dai*. If the doctor had come then the delivery might have been done by her".

In this case the woman referred to as a doctor is probably an FWV, not a doctor, who would be most unlikely to visit an ordinary village home.

Given the difficulties in using doctors, families tend to go to *dais*, the people with whom the women are most comfortable and are often acquainted, many being relatives, and who are most at hand. Pakhi (Respondent 48) commented that she preferred to use the *dai* who was her cousin. She was not used to consulting a doctor and besides there was no need.

5.5. Factors that encourage appropriate use of hospitals for difficult deliveries

Given the strong preference for home delivery, it is important that people are made aware of when it is important to get appropriate treatment. As noted, ANC was supposed to identify high-risk pregnancies, but many of the women who do subsequently have difficult deliveries are not thus identified. Given this, one approach tried in Bangladesh and elsewhere is to inform the families by providing them simple pictorial charts as to when medical assistance should be sought. Safeda (Respondent 26) noted that television programs were promoting the message that problems may arise if a *dai* (presumably an untrained TBA) delivers a child; she commented that "such things make us frightened". Ideally too, the birth attendant should be encouraged to refer difficult cases. This is particularly difficult in Bangladesh, where the main birth attendants, the *dais,* are, almost by definition, illiterate and share most of the beliefs that make women and their families reluctant to use hospitals, apart from any professional feeling that it implies a slight on their own skills.

Nevertheless, there were a number of examples of referral by *dais* or nurses either directly to hospitals or to local doctors, who themselves sometimes then referred the case to a hospital. A couple of these cases have already been cited. Such referral appears to be most likely where the local hospitals have already entered into schemes which provide nurse-midwives to local households, or incorporate the *dais* into their own system, often by providing them some training and remuneration, and perhaps most importantly by giving them some recognition.

A number of hospitals and clinics also have organised programs under which trained nurse/midwives conduct deliveries in people's

homes. Sharmin (Respondent 57) had a nurse attend her delivery at home because she was reluctant to give birth in hospital. She noted that her water broke seven days before the birth, and she called the nurse. The nurse came morning and afternoon.

Masuda (Respondent 42) stated that the local NGO clinic had trained *dais* to deliver babies correctly. She said that the *dai* delivered almost all the babies in the area. She visited Masuda every month during her pregnancy, and gave her full checkups after the fifth month; she also took her to the NGO clinic for tetanus toxoid injections. However, even if effective programs can be established to provide reasonably good maternity services within households, it remains essential that the hospitals themselves be acceptable and indeed attractive as places for delivery for more complicated cases. An important factor is that costs have to be reasonable and transparent; and hospitals have to be comfortable and acceptable given community attitudes. It is clear from what respondents say that hospital staff have to be more understanding and in touch with local people; they also need to be more family-oriented. Some hospitals and clinics evidently are attempting this: some provide facilities to help women by, for example, looking after children. An important issue is that of female doctors. Tara (Respondent 15) was cited above as indicating that one hospital had been recommended to her as it had lady doctors. Masuda (Respondent 42) said she had not used a hospital because she was too shy:

> "If I went to the hospital, a male doctor would do my delivery, and he would see my vagina, and then I would feel shy (ashamed), I know that all the doctors there are men!".

She added that if something went wrong with her pregnancy she would go to a hospital, but only if there were a lady doctor.

6. Conclusions

This paper has focused on the circumstances of childbirth and what can be done to reduce the risk of maternal mortality. Effective efforts to reduce maternal mortality should also act to reduce neonatal mortality. To reduce maternal mortality requires monitoring difficult pregnancies, and ensuring appropriate obstetric procedures, particularly for difficult deliveries. In particular cases, it may require access to surgical facilities and blood supplies. This would involve regular checkups

and ensuring appropriate procedures, ideally by having all births managed by medically trained personnel.

The ideal way of ensuring safe births would be to have all births in hospitals, but this is not likely to be possible in the foreseeable future in Bangladesh. This is especially the case in rural areas, but applies to a considerable degree to the cities such as Dhaka, especially for the poorer population, which, although they have hospitals, do not have enough beds, or doctors and nurses. However, even if there were enough hospital facilities, there is a strong aversion to using hospitals, partly because of the costs, but also because they are seen as unfriendly, and simply not as convenient and comfortable as being at home.

Given that for the foreseeable future most births are going to be at home, it becomes necessary to ensure that people seek help when they need it. This requires that people are aware of the danger signs in a difficult pregnancy and childbirth, and that they seek appropriate attention. There have been trial programs to inform people of the danger signs, and to encourage them to seek medical help. Preferably, however, all births should be attended by someone with at least some training, who could safely undertake normal deliveries, and could refer, and indeed assist women to seek treatment for difficult cases at appropriate facilities. While not as effective as having all women give birth in hospital, this approach would save resources, and be more in keeping with local preferences. This would require an extensive infrastructure involving considerable resources including appropriately trained people, preferably women. A problem, as discussed, is that Bangladesh Muslim society does not have a strong concept of professional TBAs, most *dais* having conducted relatively few deliveries. Training programs have tended to train the wrong people, mostly women who do very few deliveries. The training that has been provided has often been too limited: it has suffered from a lack of follow-up training and incorporation of the TBAs into any effective structure to pay them. It might be more effective to create a new cadre of nurse-midwives, but, apart from the tremendous resource implications of this, there are very few such women currently in Bangladesh. Historically it has not been acceptable for women to be nurses in Bangladesh, and there have also been institutional obstacles to training nurses: more emphasis has been given to the training of doctors, usually men. However, there are not enough doctors either and certainly not enough women doctors. There

are signs of change, especially with the creation of the Family Welfare Visitor (FWV), an eighteen-month-trained female paramedic (see Simmons *et al.,* 1990). The FWV provides ANC as well as contraception, menstrual regulation, and in theory delivery, though in fact she is too overworked to provide this for most women, and probably has too little training, facilities or motivation to be particularly useful in providing safe delivery. Nevertheless, her very existence suggests that a special cadre of nurse/midwives is possible provided the resources are available. There is a cultural aversion to touching the products of the body, particularly childbirth, but it is possibly less strong than in Hindu India, and can be overcome. A greater issue may be the acceptance of such a cadre by pregnant women and their families, but there is evidence, as indicated in some of our interviews, that nurses and trained TBAs are accepted provided a proper structure exists, and they are properly remunerated.

Even with effective nurse/midwives, or trained TBAs, it is still essential to have a hospital facility that is acceptable to the potential clients. This should be affordable and family-oriented, making it possible for women to have their families and friends with them as much as possible. Given the strong aversion to the presence of men, particularly ones outside the family, at childbirth, it is also important that delivery services be conducted, if possible, by women doctors and nurses. Where there are appropriate programs, the data indicate a good response.

References

BACKETT, E. M., A. M. DAVIES and A. PETROS-BARVAZIAN (1984), "The risk approach in health care – With special reference to maternal and child health, including family planning", *Public Health Papers*, no. 76, World Health Organization, Geneva.

BLANCHET, T. (1984), *Women, Pollution and Marginality: Meanings and Rituals of Birth in Rural Bangladesh*, University Press Limited, Dhaka.

CALDWELL, B., I. PIERIS and B. KHUDA (2001), "Is there an urban health crisis? An investigation of the slums of Dhaka, Bangladesh", *HTC Working Paper* no. 26, Health Transition Centre, Australian National University, Canberra.

FAUVEAU, V., K. STEWARD, S. A. KHAN and J. CHAKRABORTY (1991), "Effect on mortality of community-based maternity-care programme in rural Bangladesh", *The Lancet*, vol. 338, issue 8776, p. 183-186.

KASONGO PROJECT TEAM (1984), "Antenatal screening for fetopelvic dystocias. A cost-effectiveness approach to the choice of simple indicators for use by auxiliary personnel", *Journal of Tropical Medicine*, vol. 87, no. 4, p. 173-183.

KESSEL, E. (1987), "Maternity care: its opportunities and limits to improving pregnancy outcomes", in: A. R. Omran, J. Martin and B. Hamza, eds., *High Risk Mothers and Newborns*, Ott Publishers, Thun.

KOENIG, M. A., V. FAUVEAU, A. I. CHOWDHURY, J. CHAKRABORTY and M. A. KHAN (1988), "Maternal mortality in Matlab, Bangladesh, 1976-85", *Studies in Family Planning*, vol. 19, no. 2, p. 69-80.

MAINE, D., M. Z. AKALIN, J. CHAKRABORTY, A. DE FRANCISCO and M. STRONG (1996), "Why did maternal mortality decline in Matlab?", *Studies in Family Planning*, vol. 27, no. 4, July/August, p. 179-187.

MITRA, S. N., A. AL-SABIR, T. SAHA and S. KUMAR (2001), *Bangladesh Demographic and Health Survey 1999-2000*, National Institute of Population Research and Training, Mitra and Associates, and ORC Macro, Dhaka and Calverton.

MOOKHERJI, S., T. T. KANE, S. EL ARIFEEN and A. H. BACQUI (1996), "The role of pharmacies in providing family planning and health services to the residents of Dhaka", Bangladesh, MCH-FP Extension Project (Urban) *Working Paper* no. 21, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka.

RONSMANS, C., A. M. VANNETTE, J. CHAKRABORTY and J. VAN GINNEKEN (1998), "Decline in maternal mortality in Matlab, Bangladesh: A cautionary tale", *The Lancet*, vol. 350, issue 9094, p. 1810-1814.

SIMMONS, R., M. A. KOENIG, and A. A. Z. HUQUE (1990), "Maternal-child and family planning: User perspectives and service constraints in rural Bangladesh", *Studies in Family Planning*, vol. 21, no. 4, p. 187-196.

STARRS, A. (1987), *Preventing the Tragedy of Maternal Deaths: A Report on the International Safe Motherhood Conference, Nairobi, February 1987*, World Bank, Washington, DC.

UNITED NATIONS (1995), *International Conference for Population and Development (ICPD)*, New York.

UNITED NATIONS (nd), *Women's Health and Safe Motherhood: A United Nations Report*, Department of Economics and Safe Motherhood, Population Division, New York.

WORLD BANK (2002), *World Development Indicators Database*, April, World Bank, Washington, DC.

WORLD HEALTH ORGANIZATION (1986), *Essential Obstetric Functions at First Referral Level. Report of a Technical Working Group. Geneva, 1984*, Document FHE/86.4, Geneva.

8

IS IT POSSIBLE TO TURN THE TIDE FOR MATERNAL HEALTH? INVESTING IN SAFE MOTHERHOOD. AN OPERATIONAL RESEARCH PROJECT IN MAPUTO, MOZAMBIQUE

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1. Introduction

In the most recent years, attention has been devoted to the issue of comprehensive emergency obstetric services (CEOS) as a core intervention that may reduce maternal mortality and morbidity. These interventions are neither very cheap, nor delivered through a primary health care package. But it does benefit all pregnant women given that they by this get access, either directly or through referral, to comprehensive life saving skills and obstetric health care. But there is so far fairly little documentation of what this really means, what it costs, and how effective it may be (Harrison and Bergstrøm, 2001). Some global

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analyses on factors that are associated with low maternal mortality rates (MMR) claim that ordinary development or wealth indicators alone cannot explain the differences between countries, but if a country invests a larger proportion of their GNP into health services they tend to get a lower MMR. Malaysia and Sri Lanka are two often referred to countries that have managed to reduce maternal mortality ratios through health care investments over time. It is also believed that women's educational level as well as the proportion of deliveries assisted by trained health personnel count just as much on the global indicator level (Kwast and Bergstrøm, 2001). But hard core outcomes, like a reduction in maternal deaths or serious complications may be difficult to assess simply because the event – a maternal death – is fairly rare. Maternal morbidity levels are hard to quantify (Harrison and Bergstrøm, 2001). Thus, it is also difficult to evaluate impact of interventions in maternal health.

There have been considerable efforts invested in developing good reproductive health indicators, as well as information about magnitude and type of problems encountered (Ronsmans, 2001). Adverse health outcomes are often underestimated. Process indicators and patient flow outcomes, however, may be feasible to monitor. There are several determinants of women's utilization of health services. Care quality is one, affordability is another. There are also cultural barriers for women to reach quality health care (Kowalewski and Jahn, 2001). But it is also assumed that even poor women have some resources. These can be mobilized if maternal health services are strengthened and this is made known to the community of pregnant women.

In most poor countries, including Mozambique, maternal and perinatal morbidity is invariably linked to medical problems or risks that can be handled during antenatal care, such as positive syphilis serology, malaria in pregnancy, anemia, low weight gain, and high blood pressure complications (Osman *et al.*, 2001). But a substantial proportion of maternal deaths are found in women with no significant medical risk factor (Granja, 2002; Machungo, 2002). A positive outcome may be entirely dependent on a health facility's ability to respond to maternal urgencies. In Mozambique, access to services that can provide both basic and comprehensive emergency obstetric care including Caesarean section is very limited. Caesarean section (CS) coverage for many parts of the country is no more than 1-5% (Bergstrøm, 2001). There is no global consensus on the optimal Caesarean section rate,

but it is generally agreed that if coverage is less than 1% of all births, the capacity is well below standards even to save maternal lives. Increasing access to operative delivery could therefore contribute to diminished maternal mortality rates (Buekens, 2001).

UNFPA and NORAD, among others, are co-founders of a large reproductive health program in Mozambique. The maternal health component is implemented by the Ministry of Health and the Maputo City Health Authorities. The objective of this project was to establish one more hospital providing comprehensive emergency obstetric services (CEOS) in Maputo City. We here aim to present some results from the first three years of the project.

2. Operations research design

An operations research model for the evaluation of maternity services in Maputo City was designed. Improvements due to the implemented project were assessed. The operations research effort has followed the project from its start. The following report aims at demonstrating how needs are both created and met in an effort to improve services for pregnant women. The changes have come about very quickly, so even if the method of the research is a "before-after" design, and not a controlled trial, we believe that it is the project itself that has initiated the changes.

3. Background and context for the project

Maputo City is the capital of Mozambique, and a typical urban growth center. The city and its surroundings are inhabited by more than one million people, and adding the province, population catchment area increases till well above 1.5 million. Compared with the rest of Mozambique, the health infrastructure and access to services is fair, and there are several hospitals in the area. Maputo has about 50,000 maternal deliveries annually within its city limits. Most deliveries (80%) are believed to be assisted by a trained health care worker. This training is most often a three-year post primary education to conduct normal deliveries, a so-called basic midwife. This *MCH nurse,* as she is called, has many duties, and she covers services like antenatal care (ANC),

deliveries, post-partum care, child health, and family planning. The antenatal care coverage is high (more than 90%) (Challis, 2002). The number of visits is actually sufficient but the quality of ANC is still inadequate. One example: four out of every five criteria for identifying a "high risk" pregnancy relate to outcome of previous pregnancy, making it difficult for primipara to be identified as at risk (Granja *et al.*, 2001). Updated clinical guidelines are still in the pipeline (2002).

The maternal mortality ratio (MMR) in Mozambique is estimated to be high: at 500 to 1,500/100,000 live births (National Maternal Mortality Review, 1999), and a large proportion of women in the rest of the country deliver their babies without assistance from skilled health workers (Challis, 2002). The situation in Maputo is somewhat better than in the rest of the country, and because it is an urban center, many women seek clinic or hospital care for delivery. There are nevertheless a significant number of women that die, even within the institutions.

Before this project, the only referral hospital was the Hospital Central Maputo (HCM) which is the University teaching hospital, and the only hospital that until 1999 offered 24 hour comprehensive emergency obstetric services (CEOS) (Osman, 2000; Granja, 2002). The other two maternity hospitals and several peripheral maternities in the city could take care of normal deliveries, but had to refer all deliveries in need of specialist care including Caesarean sections. Thus, the referral maternity hospital was suffering from severe overburden of patients needing emergency and/or surgical interventions. In order to restrict admittance to this hospital, patients who self-refer have to pay an admission fee. Referred patients from other units were supposed to be exempt from this fee. Because of this hospital congestion, there was an urgent need to upgrade maternity services in other hospitals in Maputo City. On the other hand, the surrounding province also suffers from a lack of proper provincial hospital facilities. It is a justified assumption that the Central Hospital also catered for a number of patients residing in the province.

4. Project justification and objectives

There are several reproductive health indicators in Mozambique in general and in Maputo specifically that justify intensified effort to do something about maternal and reproductive health services. There is

hardly any quality coverage of postnatal care including family planning. Integration of various reproductive health components into one comprehensive program is not yet implemented. Because of suboptimal functioning of first-level maternity services, too many normal deliveries self-refer to the hospitals and women with anticipated complication risks are transferred to the central hospital, which is overburdened with patients with a variety of small or serious complications, some of which could have been handled at a more peripheral level.

The core activity in this subprogram was to renovate and upgrade the facilities both regarding physical infrastructure and quality of care, in order to increase the capacity in one major hospital, Hospital Geral Jose Macamo (HGJM), and its satellite clinics with maternities. The aim was that it would function as an around-the-clock emergency obstetric unit, with the ability to perform the basic life saving skills like surgical deliveries including Caesarean sections, blood transfusions and resuscitation of neonates.

With this service in place, it was anticipated that some of the burden at the central hospital would be relieved. But it was also thought that this "new" hospital could be designated to serve as a teaching site for training of postgraduate medical doctors, midwives and other personnel that need special skills training. Thus, upgrading this facility will not only benefit the immediate recipients of care, but also the central level and the teaching and training ability of the country at large.

5. Operations research methodology

The methodology of the operations research is varied. A lot of effort has been spent trying to get the best out of existing routinely collected data, both from this facility and the whole area. Typical sources of quantitative data are case registration in transfer books, admission books, maternal delivery books, theatre records, and antenatal care cards. There is actually an abundance of data, but most of it is never made available in electronic forms for detailed analysis. Ideally, some of this data collection should be an ongoing uninterrupted type of health care assessment at the district level. Unfortunately this is not the case. An outcome of the project should therefore be to establish some skills in setting up a health information system that works especially for self-assessment within the institution. We have also entered

time series of consecutive cases at certain intervals, to be able to monitor changes, but this is too time-consuming to be a routine type of data collection. We have also kept track of patient flow data continuously.

We have used a general Quality of Health Care assessment methodology, and paid attention both to structural inputs, processes, outputs and outcomes. A variety of methodologies are needed for such a comprehensive review. Routine quantitative patient-based data, direct observations of health care delivery, and several smaller participatory and non-participatory surveys and studies have been conducted throughout the period. These deal with patient satisfaction and utilization issues, quality of care and cost issues, as well as a project calendar or diary. Our baseline data are from 1999, and we have followed the project up to the middle of 2002. Thus, our presentation will be geared towards presenting the challenges and gradual changes at many levels of care provision and structure. We have also aimed at going beyond the most often used process indicators used for such assessments (Safe Motherhood Needs Assessments were performed for Mozambique in 2000-2001) in order to get a more detailed picture of the situation

6. Baseline situation analysis

At the start of the project, the maternity at this hospital (HGJM) was only functioning as a basic maternity unit with no provision of emergency obstetric services besides what midwives could provide. After lunch hours, there was no specialist doctor on call. Sometimes there was a surgical technician, who could perform CS but not determine the indication for one. There was a functional theatre, but as there was a conflict of priority in use of the facility for CEOS procedures, there was a need for both increased capacity and for renovation. There was no specific theatre assigned to emergency obstetric use. The only obstetrics/gynecology (OB/GYN) specialist was also the hospital director, and he had not been in this service for very long. He could, however, perform some elective surgery, in competition for theatre space with any other surgical procedures. All emergencies, women in need of Caesarean sections, and all complications had to be referred to the Central Hospital. There were some planned elective Caesarean sections during mornings, but never more than one or two per week.

7. Physical infrastructure in hospital

The hospital's main asset was its strategic location nearby one of the main roads out and in of Maputo City. Several types of public transport serve this area. The building is old, and severely dilapidated: in acute need of renovation. The physical infrastructure of the hospital building was also marginal for the large burden of maternity patients seen, the wards and admission room being crowded and not systematically organized for a smooth running of routine maternity services. There were no specific facilities for outpatient routine gynecological procedures, and most of the equipment and infrastructure was not in a well functioning condition. Water and electricity supply was unstable.

8. Investments and interventions

The project has as a primary aim renovated the surgical theatre and established one designated theatre for emergency Caesarean sections and other obstetric interventions. In addition, the program sought to renovate the various wards, including maternity reception area, delivery room, postnatal room, gynecology emergency outpatient theatre and gynecological in-patient rooms, doctor's quarters, and other facilities in the hospital. These now look fresh and new, function well and patients are admitted in a structured way. In order to make it attractive and technically rewarding to work in the unit for young professionals and trainees, it was also decided to procure necessary technical apparatus, including surgical tools for emergency and elective Caesarean sections, cardiotocograph (CTG) for selective fetal heart rate monitoring, and an ultrasound scanner for selective fetal observations. There is also 24-hour electric supply with emergency backup, a running blood bank that can do HIV-screening of donated blood, and running water in the delivery room. Toilets, baths and wards are also being renovated, and the postpartum wards are expanded due to an anticipated increase in patient load.

In the satellite clinics in the periphery, namely the Bagamoyo and Catembe maternities, renovation also took place and there was a provision of some basic infrastructure. In order to help facilitate needed referral transport, procurement of an ambulance and other vehicles,

and radio communication systems between the facilities and vehicles was necessary. It was decided that local manufacturers should be responsible for the supply of consumables, like gloves and sutures. These consumables were acquired locally with project funds when they were not available or sufficient in the normal government supply.

9. Manpower and staff structure

The hospital director and the program manager act as project coordinators. The hospital director who is also head of the maternity is the project coordinator; he is the national counterpart of the project technical adviser. Both are trained specialists in OB/GYN, and therefore very key persons in charge of the planning and implementation of the change process and day-to-day program management. On the other hand, it is completely unrealistic to run a 24-hour service with two specialist doctors only. Due to a general shortage of trained OB/GYN specialists in the country, this was an urgent problem that had to be solved by inputs from external sources. Thus it has been necessary to explore the possibility to recruit expatriate doctors for the first period, and two – one Egyptian posted under Egyptian assistance to Mozambique and one Cuban paid by UNFPA – are already working in the wards. Two more Mozambican doctors were also posted by the Ministry.

The surgical procedures are during daytime performed by surgical technicians. They could theoretically also work night shifts, but so far not enough numbers of this cadre are employed. They may sometimes need medical supervision. The anesthetists are also trained technicians, but also this cadre of staff needs supervision from a trained medical person, like an expatriate trained specialist in anesthetic techniques. The remaining uncovered night and some weekends shifts are shared by senior postgraduate trainees in obstetrics and gynaecology from the Central Hospital who are then paid by the project as overtime work.

There has also been a shortage of trained nurse midwife staff in the hospital.

The hospital has recruited an extra core group of skilled midwives to deliver services but also to act as supervisors/trainers and to overlook the quality of services in the hospital. A critical issue was also to recruit theatre nurses and surgical technicians trained in medical tech-

niques for evening and night shifts and to establish a running shift schedule for doctors, including a tertiary level advisory backup system. There is now one doctor on call present in the hospital itself at all hours. Fortunately, cellular telephone networks are working well in Maputo, so distance consultations are possible in urgencies. One of the hospital's OB/GYN specialists is on standby each day for any support that may be needed especially when a postgraduate trainee is on duty.

10. Clinical routines and procedures

To improve quality of care, it was also decided to establish good clinical ward routines, and to provide an ongoing medical supervision of staff by initiating a routine of doctor-lead morning grand rounds every day, plus follow-up during the afternoon and evening. In order to provide comprehensive care, one sought to establish some emergency clinical services like a gynecology outpatient clinic and a safe abortion clinic. They have been running somewhat longer than the emergency services for delivery. An observation ward for complicated maternities (preeclampsia, malaria) is also in place. Malaria in pregnancy is one leading cause of maternal deaths (Granja, 2002).

In order to motivate and train core staff, it was decided to establish regular supervision and monitoring routines in the hospital and its catchment area, by regular supervisory visits and monthly review meetings in hospital and with city health staff. It was also decided to train and give refresher courses to core staff, in order to increase their knowledge of the basic concept of reproductive health, to increase their skills in handling emergencies, to broaden their scope of services to include proactive sexually-transmitted diseases (STD) assessment, family planning (FP) advice and services and postnatal care of the woman and her child. After the emergency clinical services became the core daily activity also for project staff, peripheral supervision has suffered from time constraints. Formal training sessions and staff exchange between maternities do take place, but regular supervision and audit meetings are somewhat compromised.

11. Quality of care framework

The core research activities have focused on several aspects of quality of care from both patient and provider perspectives. In 1999, the project staff and some consultants conducted a Patient Satisfaction Survey, and another consultant did a Staff Satisfaction Study later in 1999. The results of the studies were discussed with project staff during the first part of 2000. Two medical students did a participant observation Quality of Care Process Study, and later in 2000 and 2001 project staff implemented a study on clients' reasons for use of maternity services and patient and staff evaluation of service components in various units. A description of major changes in the facility conditions has also been demonstrated by photographic documentation of physical infrastructure.

The core messages from the patient satisfaction studies have to be interpreted with caution, as it is difficult to interpret patient satisfaction simply because many patients have no realistic expectations about quality services as such. They may provide a researcher with information that does not really reflect their core concerns. This being said, however, the studies both show that the clients are unaware of what they can expect from the health units, like their right to information, privacy, etc., but also raise some areas of real concern. For example they came to HGJM once they knew there was a doctor 24 hours or an ambulance available, but they did not worry much about overcrowding, lack of counseling or were not aware about biosecurity. Patients do seem to seek a health care institution where they anticipate getting good quality technical care. They are, however, not content with the adequacy of the food they get, the ward conditions, and the staff's ability to relate to their relatives. Counseling by the health workers and communication in general between the health worker and her client was weak. As such, the clients knew very little about their pregnancy, the methods of family planning they were taking and similar things.

12. Staff satisfaction

There also has to be a careful interpretation of the staff satisfaction studies. Firstly, the staff was reluctant to discuss issues in a focus group, and did not want to be public with their complaints or con-

cerns. Individual interviews functioned somewhat better. Key messages were, however, that staff seemed to be under constant pressure by the burden of daily routines. They seem to have little time or motivation to put a lot of emphasis on broadening their scope of work to include newer issues, like FP/condom counseling and STD/HIV advise or counseling. Another issue is that of reaching out to men about STD care. It seems as if staff is more comfortable with handling technical or skills related jobs than the communicative parts of their work. And the staff did not pay a lot of attention to their patients' needs for specific information. Staff, however, is concerned with working hours, shifts and workload, low pay and lack of supplies.

There is a general wish to receive upgrading and refresher courses on core issues, maybe most of all motivated by economic incentives, even if most of the staff feels comfortable about performing basic obstetric care for normal deliveries. There is also an expressed need to discuss the issue and contents of postnatal care as well as for better communication between antenatal care/health centers, and maternities.

Concerning the work organization, the main message is around the issue of involving staff in discussing and deciding upon work schedules and work plans. In general, many staff have a too low job motivation due to low salaries, poor working conditions, unfavorable work schedules, etc.

There is still considerable scope for improvement of quality. Due to high patient turnover, and scarcity of facilities for hand washing and other water outlets, the hygienic standards can still improve. Sometimes delivery beds are not decontaminated with disinfectants between deliveries, but the project has provided enough clean gloves and bed sheets to give basic protection to staff and patients. Electric and water supplies are, fortunately, relatively stable because of hospital construction works done with alternative financial resources.

13. Patient flow patterns

In order to monitor patient flow, the routine patient registries like admission books, maternity delivery books and other registries were examined and core data were extracted on a monthly basis. Some new registries were established, like outpatient emergency registers. The

data were exposed on the hospital walls, so that anyone could follow the progress.

Data collected were number of admissions, number of deliveries, number (and %) of transfers from the project hospital to the Central Hospital, or from peripheral maternities to Central Hospital. Data was also collected on number of stillbirths and early neonatal deaths (< 24 hours), number of preterm babies (< 2,500 g), and a selection of other clinical data from a large sample (n=6,129) of delivery and antenatal records.

Procedures registered were number of Caesarean sections. No emergency sections were performed at the start of the project in 1999. We also recorded number of emergency gynecological cases treated by diagnoses, and number of abortion cases treated (Table 1).

Table 1
Obstetric complications seen at the intervention hospital HGJM
in the transition period January-August 2000

Obstetric complications	Month							
	Jan	Feb	Mar	Apr	May	June	July	Aug
Prolonged/obstructed labor				60	49	57	54	62
Uterine rupture				1	1	2	1	0
Sepsis post-partum				3	2	2	1	2
Pre-eclampsia/Eclampsia				26	13	28	11	25
Abortion, septic/spont./ ruptured	91	70	87	124	151	108	134	152
Ectopic pregnancy				2	3	4	3	7
Malaria in gravidity				*	72	59	42	45
Other complications				45	49	57	60	71
Stillbirths, total	2	3	4	44	47	53	55	48
Lacerated foetus	0	2	2	6	5	6	5	6
Maternal death - Hemor-rhage					1	0	1	0
Maternal death – Sepsis					1	0	0	0
Maternal death – Other				1	1	0	0	0
Maternal death – Total				1	3	0	1	0

Other outcome data are number and causes of maternal deaths – if any – and types of obstetric complications seen. We did most of the data analysis by establishing a computerized patient information system by entering core data from samples of antenatal records and maternity books. For the antenatal records, the data entry is time consuming, so this activity will be done for specific time periods for survey purposes only. The maternity protocol data was entered and analyzed on a monthly basis, to have a clear picture of all changes taking place at all times.

14. Core patient flow data

Tables 2, 3, and 4 demonstrate that there has been a fourfold increase in admissions and deliveries during the second half of 2000 as compared with baseline data. There is also a substantial increase in referrals to HGJM after the project launch, and there are many more referrals from the peripheral maternities inside and outside the catchment area. There has been an effort to request the data management officers in the Central Hospital to provide some core data on changes in patient load and procedures in the project time period. These data are shown in Tables 5 and 6.

Table 2
Patients transferred from peripheral units and HGJM
to the Central Hospital, January-August 2000[a]

	Month							
	Jan	Feb	Mar	Apr	May	June	July	Aug
HGJM	164	170	135	14	7	3	5	8
Chamanculo	71	85	124	-8	43	56	24	19
Bagamoio	140	127	151	9	14	31	8	8

a. Not much changed in the Catembe pattern of referral, as it is across the bay with a ferry and has always been a lot closer to the Central Hospital. However, Catembe referrals are very infrequent as it is a very small maternity.

Table 3
Transfers from the peripheral units
to the intervention hospital HGJM, January-September 2000

	Month								
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep
Chamanculo	0	0	0	68	43	56	63	76	102
Bagamoio	0	0	0	98	65	120	53	73	68

Table 4
Admissions to the delivery ward at HGJM, January-August 2000

	Month							
	Jan	Feb	Mar	Apr	May	June	July	Aug
Deliveries	384	395	383	805	882	953	1,065	1,074
Caesarians	9	6	4	116	109	120	143	138

Table 5
Comparing numbers of Caesarean sections in HCM versus HGJM,
January-August 2000

	Month							
	Jan	Feb	Mar	Apr	May	June	July	Aug
HCM	337	305	404	343	327	308	291	280
HGJM	9	6	4	116	109	120	138	143

Table 6
Comparison of number of births at the Central Hospital (HCM)
versus the intervention hospital (HGJM), January-August 2000

	Month							
	Jan	Feb	Mar	Apr	May	June	July	Aug
HCM	1,353	1,415	1,772	1,274	1,072	942	998	925
HGJM	384	395	383	805	882	942	998	925

Number of admissions has increased more than three hundred percent. Still, the largest number of deliveries (70%) is self-referred from home, and the numbers steadily go up. These changes have come about without any public advertising whatsoever. Patients learn about good services through gossip and use them accordingly. Tables 5 and 6 also demonstrate how transfer patterns have shifted away from the Central Hospital and towards HGJM. At the end of 2001, most of the transferred patients now come from outside the hospital catchment area, either from smaller maternities in Maputo or from Maputo Province (50%).

The HGJM Caesarean section rate, for the period January-August 2000 is as high as 12-13%, similar to that of other referral tertiary units, while most provincial hospitals have minimum CS rates, around 5% (Table 7). The CS rate at the Central Hospital has also gone up (Table 8), even if the total number has decreased somewhat. This is due to the proportionally larger decrease in normal self-referred deliveries (Table 9). This university hospital now receives a larger fraction of the really complicated deliveries from the area.

Table 7
Percentage of Caesarean sections at the intervention hospital (HGJM) during the transition period January-August 2000, the total being for the period after the launch of 24 hours CEOS*

	Births	Caesareans	% Caesar.
Jan	384	9	2.3
Feb	395	6	1.5
Mar	383	4	1.04
Apr	805	116	14.4
May	882	109	12.5
June	953	120	12.6
July	1,065	138	13.0
Aug	1,074	143	13.3
Total	5,941	645	13.5*

Table 8
Percentage of Caesarean sections at the Maputo Central Hospital during the transition period

	Births	Caesareans	% Caesar.
Jan	1,353	337	24.9
Feb	1,415	305	21.6
Mar	1,772	404	22.8
Apr	1,274	343	26.9
May	1,072	327	30.5
June	942	308	32.7
July	998	291	29.2
Aug	925	280	30.3
Total	9,751	2,595	26.6

Table 9
Comparing births at the Maputo Central Hospital (HCM) versus HGJM and its catchment area, January-August 2000

	Month							
	Jan	Feb	Mar	Apr	May	June	July	Aug
HCM	1,353	1,415	1,772	1,274	1,072	942	998	925
HGJM	384	395	383	805	882	953	1,065	1,074
Bagamoio	233	246	315	285	396	340	386	336

We also demonstrated an increase in admission of patients with other gynecological needs. Catchment area 600 patients are seen each month, and 300 of these are abortion related. Mortality from induced or spontaneous abortion complications has not occurred. The hospital does provide safe medical/surgical abortion services for a fee, and treat all types of complications of clandestinely induced and spontaneous abortions with vacuum aspiration.

15. Mortality and morbidity

Because of increased patient flow and more complicated deliveries, we also see more fatal outcomes. Before April 2000, all complications were referred to the Central Hospital. There have been 10

maternal deaths in 2000 and 8 in 2001 up to October. The institutional maternal mortality rate is 121/100,000. Case fatality rates are between 1.2 and 1.5%. The institutional perinatal mortality rate is 44‰, but unfortunately this is a minimum estimate, up to the first 24 hours of life, as mothers and their babies are discharged already on the second day. Late neonatal deaths may not be registered. But stillbirths are numerous, and during the first six months of 2001 there were altogether 51 intra-partum deaths. This is of course related to quality of monitoring as well as delays in actions. Usually it takes one to two hours to effectuate an indicated Caesarean section. If the theatre is occupied already, the waiting period may be longer, as there is only one theatre team functioning in the evenings and at night. This is like the situation in maternal and newborn health in Mozambique at large (Stanton *et al.*, 2001; Machungo, 2002; Osman, 2000). In HGJM and HCM things have improved and most operations are performed within 30-45 minutes from when the decision is made, but in most provincial and rural hospitals the delay is still long.

The most frequent morbidities seen are hypertension (285 cases in 6 months), malaria (266), and obstructed labor (141) and hemorrhage (81), while ectopic pregnancies and sepsis were less frequent. Being a country where HIV/AIDS is on the increase, these patterns may be expected to change even to the worse in the near future (Salomon and Murray, 2001).

16. Can the changes be attributed to any other events?

We do believe that the changes are directly related to the interventions applied. The change came about quickly after the launch, and admissions have steadily gone up since then. There have been some other events that have influenced the progress. In some months around December 1999 and January 2000 the wards and the theatre suffered from closure due to reconstruction, and in February the whole hospital as well as the rest of Mozambique was flooded both with rain and with patients suffering from cholera and malaria. Other than that, the increase in patient load has been steady. This is threatening to overwhelm and exhaust the current staff, so the situation is by no means under control. But is has been possible to change the situation dramatically for the women.

17. Cost issues and sustainability

This is not a cheap project. Both the investment and running costs are substantial. The total investments for the three years are 1,028,817 US dollars. Paying overtime for core staff and increased use of consumables increases monthly running costs. It is estimated that the added cost on top of the Ministry of Health budget per safe delivery at the current level of expenditure is some 16 US dollars, but introducing a cost-sharing scheme in this current context of very poor clients is not seen as feasible (Koenis, 2001). This is much more than the government can pay for health services per capita. It is estimated that Mozambique will need external funding for running health services for many years to come, and donor policies now go towards basket funding and Sector Wide Approaches (SWAP). Therefore, it is problematic for the poorest countries to develop good maternal health programs within the current funding situation (Shiffman, 2000).

But the project has not been extravagant in any sense, it has just provided what pregnant women should have and want to have in a world that has passed its second millennium. Because this hospital does not require user fees, it attracts patients from all layers of society, and half of the patients actually come from outside the official catchment area, like Maputo Province. A large proportion of patients are normal deliveries that could have been handled at a peripheral maternity, but it seems as if the added security of access to CEOS is important for women's choice of place of delivery. The Maputo Province has very limited capacity for CEOS (less than 1%).

18. Discussion of obstacles and advantages of the project

There are several issues that already stand out as problem areas that need to be addressed. Some of these issues are related to manpower, quality of care and sustainability. As the project is implemented in an urban context, with easier access to many needed items, it is not easy to transfer the framework to a more rural setting. On the other hand, many people live in the urban densely populated area, and health care seeking behavior favors development and use of modern facilities.

Some of the more culturally determined restricting factors are not as predominant in this area. On the other hand, in order to avoid severe overburdens in the system, more emphasis will have to be put on a redistribution of some of the not so complicated tasks from central to more peripheral levels of health care, and quality improvements at more peripheral maternities without doctors including streamlined transport in emergencies, have to be further developed.

Manpower. As by now, it will not be possible to run these services without more inputs on the manpower side than what is planned for this service from the government norms. It may also be difficult to sustain some of this manpower, as some of the recruited staff has already resigned. These are normal events in service delivery, and tell us that those concerns for staff sustainability have to be addressed: both sustaining employed staff and preparedness for hiring new staff. Maternal mortality reduction is a core health strategy in Mozambique, but it is not always easy to understand how this strategy can be made operational within a health sector reform orientation (Goodburn and Campbell, 2001). The Ministry of Health is under serious pressure to decentralize health services, and qualified staff are most often posted outside the peri-urban area around the capital or lost to Non-governmental Organizations (NGO) or private sector activities. The project has not been able to argue its case for increased staffing assignments as well as it had anticipated. The short-term solution may be to have volunteers and expatriates to work even for a longer period of time, the long-term solutions have to be related to increasing the number of well-qualified health care personnel in the country through staff development and training. The current staffing scheme is designed after the previous, not the current workload of the hospital. There is a chronic shortage of doctors in Mozambique, especially specialist trained ones. In this hospital as in many other parts of Mozambique, hospitals rely heavily on other types of staff, namely the MCH nurse midwife who can deliver babies, and the surgical technician who can do Caesarean sections. These cadres are essential in health care delivery in Mozambique, and have to be maintained. This relieves the burden off the doctor on call, who may have to monitor and care for some 30-40 complicated deliveries during one 24-hour shift, many of those being complicated by malaria, obstructed labor, hypertension, sepsis or anemia.

Quality of care. Although the basic care is of appropriate technical quality most of the time, there are many small entry points for improving quality. Correct filling out of report forms, partographs and other tools for monitoring work processes help staff improve services, and daily supervision ward rounds are important working tools for doctors and nurses. Regular supervision may be necessary as a routine, because some staff seem to relapse back to "old practices" just for convenience or because some infrastructure has breakdowns or is not available at all times. There is considerable scope for improvement in the part of caring that involves communication and sensitivity for clients' needs and perspectives. It may be difficult to actually measure these aspects of quality improvements, but tools like the UNICEF "Baby friendly hospital" accreditation, perinatal audits or direct observations can be used (Osman *et al.*, 2001). It is also important to implement improved measures to protect both the provider and client from problem of HIV.

High patient load/burden. As this project picks up, we have experienced an actual increase in the patient load to the facilities, and an increasing number of more complicated cases to be handled. This may affect staff motivation temporarily, before they get used to this increase in the demands on their skills, but could also contribute to making work more varied and interesting for them. The staff is already at some times working under hard pressure, especially in mornings, but better routines and competency building may increase staff self-esteem and feeling of mastery.

Facilitating factors. Fortunately, this project also has some very good and facilitating conditions that enhance development. There are two very committed and competent staff members that run the project, both of them being highly skilled in OB/GYN and reproductive health issues and with very good ties to the local context. There is a non-bureaucratic attitude and management style of project leaders, which facilitates rapid changes. The core project staff competence also seems very good, and motivation is high.

19. Summary and conclusions

This project clearly demonstrates that improving maternal health and obstetric care can be achieved even in poor countries. It demonstrates that there is a need for the services, and that women utilize

them once they are there. Women seem to prefer to deliver in a place where they know it is safe and they can be assisted, if they have a choice. This is demonstrated by the fact that the real increase in patient flow came after the launch of comprehensive services. The peripheral maternities, even if upgraded somewhat, did not experience the same increase. They still cater for normal uncomplicated deliveries for the most, as they only have basic-level staff, limited logistics and equipment.

The project also demonstrates that it is not enough to invest in only one or two components of maternity services. A whole system has to be improved, and teamwork with devoted leadership is important. Demonstrating changes and challenges through documentation helps motivate those who work in the project. Sustainability has to be addressed, and there is a need for better communication with central health administrations about staff and cost issues. Maternal health and obstetric services are necessary, as several background factors as well as new emerging factors like HIV/AIDS contribute to a high maternal morbidity and case fatality in Mozambique as in other poor countries (Bassett, 2001). The relative cost compared to the large number of life years saved through survival of both mother and her baby and remaining children justifies the input (Rosenfield and Figdor, 2001).

20. Recommendations for future research

Very often development programs are only evaluated after the completion, without a proper baseline, and thus it may be difficult to assess the real impact of these. On the other hand, research may not always have clear policy implications. This study has demonstrated the case for operations research around large reproductive health programs. Both impact studies, quality of care studies and cost issues may benefit from a method triangulation, utilizing a variety of research methodologies and including provider, policy-maker and client perspectives. Another study (Caldwell, see his text in this book) has demonstrated the relevance of addressing quality of and access to maternal care from a community perspective, and these issues are also important from a health systems perspective. The variables should include information on constraints in input, policy and available resources, administrative issues and staff patterns, health care processes performed, the quality and timing of these, output data like number of clients served as

well as referral patterns, and outcome data like morbidity, complications and mortality.

References

BASSETT, M. T. (2001), "Keeping the M in MTcT: Women, Mothers and HIV prevention", *American Journal of Public Health*, vol. 91, p. 701-702.

BERGSTRØM, S. (2001), "Quality and audit of maternity care", in: J. B. Lawson, K. A. Harrison and S. Bergstrøm, eds., *Maternity Care in Developing Countries*, RCOG Press, London.

BUEKENS, Pierre (2001), "Is estimating maternal mortality useful?", *Bulletin of the WHO*, vol. 79, no. 3, Geneva.

CALDWELL, Bruce (2002), "Why women continue to die from childbirth in Dhaka, Bangladesh", paper presented at the Interregional Seminar on "Reproductive Health, Unmet Needs and Poverty: Issues of Access and Quality of Services", CICRED, Bangkok (see text in this book).

CHALLIS, K. (2002), *Monitoring Pregnancy for Improved Perinatal Outcome in Mozambique*, Doctoral thesis, Karolinska Institute, Stockholm.

GOODBURN, E., and O. CAMPBELL (2001), "Reducing maternal mortality in the developing world: Sector-wide approaches may be the key", *British Medical Journal*, April 14, vol. 322, no. 7291, p. 917-920.

GRANJA, Ana Carla L. (2002), *Maternal Deaths in Mozambique: An Audit Approach with Special Reference to Adolescence, Abortion and Violence*, Doctoral dissertation, Karolinska Institute, Stockholm.

GRANJA, A. C., F. MACHUNGO, A. GOMES and S. BERGSTRØM (2001), "Adolescent maternal mortality in Mozambique", *Journal of Adolescent Health*, vol. 28, p. 303-306.

HARRISON, K. A., and S. BERGSTRØM (2001), "Poverty, deprivation and unsafe motherhood", in: Lawson, Harrison and Bergstrøm, *Maternity Care in Developing Countries*, RCOG Press, London.

KOENIS, H. (2001), *Feasibility Study for a Cost Recovery Programme in Jose Macamo Hospital*, KIT report, Amsterdam.

KOWALEWSKI, M., and A. JAHN (2001), "Health professionals for maternity services: Experiences on covering the population with quality maternity care", in: De Brouwere and Van Lerberghe, eds., *Safe Motherhood Strategies: A Review of the Evidence*, Studies in Health Service Organization and Policy, 17.

KWAST, Barbara E. (1991), "Safe motherhood: A challenge to midwifery practice", *World Health Forum*, vol. 12, p. 1-6.

KWAST, Barbara E., and Staffan BERGSTRØM (2001), "Training professionals for safer motherhood", in: J. B. Lawson, K. A. Harrison and S. Bergstrøm, eds., *Maternity Care in Developing Countries*, RCOG Press, London.

MACHUNGO, F. (2002), *Maternal Outcome of Pregnancy in Mozambique with Special Reference to Abortion Related Morbidity and Mortality*, Doctoral thesis, Karolinska Institute, Stockholm.

OSMAN, N. B. (2000), *The Impact of Maternal Morbidity on Fetal Growth and Pregnancy Outcome in Mozambique*, Doctoral thesis, Karolinska Institute, Stockholm.

OSMAN, N. B., K. CHALLIS, M. COTIRO, G. NORDAHL, and S. BERGSTRØM (2001), "Perinatal outcome in an obstetric cohort of Mozambican women", *Journal of Tropical Pediatrics*, vol. 47, p. 30-38.

RONSMANS, C. (2001), 1. "What is the evidence for the role of audits to improve the quality of obstetric care", 2. "How can we monitor progress toward improved maternity health", in: De Brouwere and Van Lerberghe, eds., *Safe Motherhood Strategies: A Review of the Evidence*, Studies in Health Service Organization and Policy, 17.

ROSENFIELD, A., and E. FIGDOR (2001), "Where is the M in MTCT? The broader issue in Mother-to-child transmission of HIV", *American Journal of Public Health*, vol. 91, p. 703-704.

SALOMON, J. A., and C. J. L. MURRAY (2001), "Modeling HIV/AIDS epidemics in sub-Saharan Africa using seroprevalence data from antenatal clinics", *Bullettin of the WHO*, vol. 79, p. 596-607.

SHIFFMAN, J. (2000), "Can poor countries surmount high maternal mortality?", *Studies in Family Planning*, vol. 31, p. 274-289.

SLOAN, N. L., A. LANGER, B. HERNANDEZ, M. ROMERO, and B. WINIKOFF (2001), "The etiology of maternal mortality in developing countries: What do verbal autopsies tell us", *Bulletin of the WHO*, vol. 79, p. 805-810.

STANTON, C., J. HOBCRAFT, K. HILL *et al.* (2001), "Every death counts: Measurement of maternal mortality via a census", *Bulletin of the WHO*, vol. 79, p. 657-664.

9

SERVICE FACTORS AFFECTING ACCESS AND CHOICE OF CONTRACEPTIVE SERVICES IN MYANMAR

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1. Background

To date, very little data has been available from Myanmar on issues related to the access and quality of reproductive health services. Over the past five years, the Department of Health has been engaged in an interventions research project in two townships of the country to document constraints to the provision of reproductive health services, primarily related to birth spacing, and identify and implement township level interventions to address some of these issues. The research conducted as part of this project has involved a range of methodologies that provide an insight into some of the issues related to quality and access to birth spacing services.

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1.1. The project

At the request of the Ministry of Health in Yangon, and with assistance from Population Council and International Council on Management of Population Programmes (ICOMP), WHO conducted a contraceptive method mix assessment in 1996 (WHO, 1997). This assessment was the first stage of a three-stage strategy for contraceptive introduction (Spicehandler and Simmons, 1994), promoted by WHO/HRP's[3] Strategic Programme Component on the Introduction and Transfer of Technologies for Fertility Regulation. The assessment looked at both users' needs and service delivery capacities to propose ways to respond to unmet need for contraception and to improve reproductive health status. Two key recommendations arose from the assessment and formed the basis of the second phase, or Stage II. These were, firstly, the urgent need to improve the quality of contraceptive services, and secondly, the need for a more comprehensive approach to reproductive health service delivery, with particular focus on treatment and prevention of sexually transmitted infections (STIs) and reproductive tract infections (RTIs).

The project *"A Township Model for Improving Quality of Care in Reproductive Health Services in Myanmar"* was developed with the specific objectives to: (1) improve quality of care in relation to hormonal methods; (2) strengthen private sector service provision; enhance community capability for birth spacing; and (3) broaden the scope of reproductive health services to include the management of RTIs and STIs. Two townships were selected for this project, Pyay township in Bago division, and Kalaw township in the Shan State. Stage II has an important research component. In 1997 a stand-alone qualitative study of reproductive morbidities was undertaken. This was followed by baseline data collection activities in late 1998 and early 1999, including qualitative in-depth interviews in the form of a rapid assessment, an adapted situation analysis, and a quantitative survey of women of reproductive age. Following the baseline data collection, a series of interventions were undertaken to address the specific objectives of the project. This included the development of new information materials and refinement of existing ones, an updating of the training curriculum, training of

3. HRP: Special Programme of Research, Development and Research Training in Human Reproduction.

basic health staff and private sector providers, and the provision of supplies to strengthen the diagnosis and treatment of RTIs. In late 2001 a further round of data collection was undertaken, with a focus on the service delivery setting, using a modified situation analysis approach. Table 1 shows the different data collection techniques that have been used during the course of the project.

Table 1
Number of participants in the various data collection activities, by township

	Pyay	Kalaw
Reproductive morbidities study (1997)[a]		
Free-listing	12 (32)	8 (26)
Focus group discussions	10 (81)	11 (80)
In-depth interviews	51	57
Pile-sorting	25	28
Semi-structured interviews (1998-1999)[b]		
Contraceptive users	17	17
Non-users of contraception	12	13
Men	11	12
Community leaders	6	6
Service providers	27	27
Situation analysis (1998-1999)[b]		
Inventory	11	9
Observations	16	16
Exit interviews	18	16
Survey (1999)[c]		
Women of reproductive age	795	353
Situation analysis (2001)[d]		
Inventories	31	32
Provider interviews	50	47
Provider-client interactions	26	44
Exit interviews	42	49
Mystery client visits to drug shops	35	35

Figures in parentheses indicate the total number of participants involved in the group free-listings and FGDs.
Sources: *a.* Population Council and Department of Health (2001);
b. Department of Health and Population Council (2000*a*);
c. Department of Health and Population Council (2000*b*);
d. Department of Health and Population Council (2002).

1.2. Reproductive health service delivery

In Myanmar, public sector health services are provided through a network of clinics in both urban and rural areas, organized at the township level. There are 324 townships in Myanmar, with an average population of 150,000. In larger urban areas, maternal and child health (MCH) clinics provide reproductive health services, and in rural areas the services are provided through station hospitals, rural health centers (RHCs) and sub rural health centers (SRHCs). In most townships there are one or two station hospitals and four or five RHCs. The rural health centers are generally staffed by a health assistant, a lady health visitor (LHV) and five midwives. Within the jurisdiction of each of the RHCs, there are about four SRHCs at with a midwife is stationed to provide services to between five and ten villages. Supplementing these clinic-based services, the midwives and LHVs often provide services at their own home and at the home of clients. These outreach services are not formally organized or regulated, but are an important source of services for many women. There are also voluntary community based workers in a number of villages that do not have a RHC or SRHC. Auxiliary midwives (AMWs) are trained to basic maternal health services and to provide health education. Male community health workers (CHWs) are primarily a source of health information to the community.

In addition to public sector services, there is a large private sector. In urban areas there tend to be numerous private general practitioners (GPs) and drug shops where women can receive contraceptive services and supplies. In rural areas these tend to be absent, although condoms, oral contraceptive pills and injectable contraceptives are sometimes sold at village shops. Public sector service providers also often provide some private services. As mentioned above, public sector provides often services out of the formal clinic setting, and these often bear a closer resemblance to private than public services.

1.3. Birth spacing in Myanmar

Contraceptive services have long been provided in the private sector in Myanmar, although provision in the public sector is relatively new and still has limited geographic coverage. Beginning in 1991, public sector birth spacing services are now provided in approximately one third of Myanmar's 324 townships. Data from a national Fertility and

Reproductive Health Survey (FRHS) conduced in 1997 found that 32.7% of currently married women currently used contraception, the majority of which were hormonal methods (injectables and oral contraceptives), followed by female sterilization (Table 2).

Table 2
Current contraceptive use data, by township and method, 1999 (%)

	Pyay[a]	Kalaw[a]	FRHS 1997[b]
Any method	51.7	33.1	32.7
3 month injection	20.2 (39.0)	13.3 (40.2)	11.7 (35.8)
Daily oral contraceptive	11.8 (23.0)	6.5 (19.6)	7.4 (22.6)
Condom	0.5 (0.9)	0.3 (1.0)	0.1 (0.3)
Intrauterine device	4.4 (8.5)	1.7 (5.2)	1.3 (4.0)
Female sterilisation	3.8 (7.3)	5.1 (15.5)	5.6 (17.1)
Male sterilisation	2.7 (5.1)	0.7 (2.1)	2.3 (7.0)
Safe Period	1.6 (3.0)	2.7 (8.2)	2.4 (7.3)
Withdrawal	0.0 (0.0)	0.3 (1.0)	0.8 (2.4)
Monthly injection	5.3 (10.3)	1.4 (4.1)	- *
Monthly oral contraceptive	1.4 (2.7)	0.7 (2.1)	- *
Other	0.2 (0.3)	0.3 (1.0)	1.1 (3.4)
N	638	293	15,588

Figures in parentheses show the proportion of current users using a specific method of contraception.
* The FRHS didn't differentiate between the monthly methods and other injectables and oral contraceptives.
N = currently married women.
Sources: *a*. Department of Health and Population Council (2000*b*);
b. Ministry of Immigration and Population and UNFPA (1999).

1.4. Project townships

The project townships in which project activities have been undertaken were selected to represent a variety of programme and socio-economic and geographic situations. At the start of the project both Pyay and Kalaw were new birth spacing programme townships. Pyay township receives support from UNFPA, whereas birth spacing services in Kalaw township have been supported through UNDP's primary health care project. Pyay township includes a moderate sized

urban centre in a rice growing area on the floodplain of the Ayeyarwaddy River. In comparison, Kalaw is more rural. It is a mountainous township, with considerable ethnic diversity, in the southern Shan State. Some areas of Kalaw are heavily forested, while others are under cultivation with potatoes, other vegetables, and terraced rice production. The two townships also differ in regard to STI treatment services. Pyay is the headquarters of one of the government's 36 STI teams, whereas Kalaw lacks the presence of this vertical programme structure. Data from the Ministry of Health indicates that Kalaw has a population of approximately 130,000, compared with 250,000 in Pyay.

Table 3
Background data of women of reproductive age, by township (%), 1999

	Pyay	Kalaw
Residence		
Urban	51.4	37.7
Rural	48.6	62.3
Religion		
Buddhist	97.9	93.8
Muslim	2.0	4.5
Christian	0.1	1.4
Other	0.0	0.3
Education		
No formal schooling	5.2	34.0
<5 yrs, or monastic	58.6	38.5
6-10 yrs	29.2	20.7
11+ yrs	1.8	1.7
University/college	5.3	5.1
Employment		
Agricultural/forestry	32.5	61.2
Professional/financial	3.0	1.4
Manufacturing/construction/service/transport	18.9	9.6
Social/community work	4.5	4.0
Not working	41.1	23.8
N	795	353

Source: Department of Health and Population Council (2000*b*).

The baseline survey provides some quantitative data on women of reproductive age in the two townships (Table 3). Over 60% of women of reproductive age live in rural areas in Kalaw, compared with just under 50% in Pyay. This is also reflected in figures for women's employment, where over 60% of women in Kalaw are engaged in agriculture or forestry, compared with 33% in Pyay. Education levels are generally higher in Pyay, with just 5% of women receiving no education, compared with 34% in Kalaw.

The survey also gives an insight into the contraceptive practices of women in the two townships (Table 2). In both townships, reported current use of contraception was restricted to currently married women. Just over half (51.7%) of these women in Pyay were using contraception, compared with one third (33.1%) in Kalaw. The more urban nature of Pyay township, plus the better transportation and more affluent population are likely to be factors influencing this higher contraceptive use compared with Kalaw. The Kalaw figure is similar to the national figure of 32.7% from the FRHS (Ministry of Immigration and Population and UNFPA, 1999). The pattern of contraceptive use in Kalaw is also similar to the national pattern.

2. Findings

This paper presents selected findings from the data collected as part of the project *"A Township Model for Improving Quality of Care in Reproductive Health Services in Myanmar"* to look at issues of access and quality of care in birth spacing services in Myanmar. The paper draws from findings presented in a number of project reports (Population Council and Department of Health, 2001; Department of Health and Population Council, 2000*a,b*; Department of Health and Population Council, 2002). To structure the paper we have decided to use the framework outlined in a paper by Bertrand *et al.* (1995), which highlights the importance of issues of access, quality of care and medical barriers in the uptake and continuation of contraceptive use. They argue that access impacts whether or not the individual has contact with the service provider, quality of care affects decisions to start and continue contraceptives, and medical barriers may prevent clients from receiving a specific method. Recognising that we are working in an environment where very limited data is available, at this stage we do not attempt to quantify

or qualify the links between these, or to directly link these to contraceptive use or continuation in Myanmar, but to describe the situation with regard to these points, and highlight areas where data is not available. Where pertinent, data from other available sources is used to supplement that collected within the scope of the project.

2.1. Access

2.1.1. Geographic or physical accessibility

The first issue raised under access is the most traditional of the access concepts, that of geographic or physical accessibility. Bertrand *et al.* (1995) describe this as "the extent to which family planning service delivery and supply points are located so that a large proportion of the target population can reach them with an acceptable level of effort".

As described above, reproductive health services, including contraceptive services, are provided through a network of public and private service providers in both urban and rural areas. However, actual physical access to these services differs considerably throughout the country.

Of our two project townships, Pyay is relatively urban with a good system of roads. The population is generally more mobile, meaning that contraceptive services can be reached more easily within a woman's daily activities. Kalaw on the other hand is a geographically large township with a low population density, and a poorer and less mobile population. While the location of health centers has been well chosen to provide as wide access as possible, many villages are still located at a considerable distance from the nearest facility, with little transportation and difficult terrain.

Private facilities, drug shops and private general practitioners are generally open both mornings and afternoons for seven days per week, with some also providing services in the early evening. Public facilities are officially open for considerably less time. Rural health centers tend to be open three mornings per week, and sub rural health centres for one to three mornings per week. During the hours that the public facilities are officially closed, the health staff conduct home visits for a range of reproductive health services. Since health staff are often also resident at the public health facilities, clients visiting out of official clinic hours will also be provided with services.

Quantitative data is not available on the reasons for women not going to a particular service delivery point, although survey data in Pyay and Kalaw indicate that 30.6% (n = 422) of current contraceptive users chose their service provider primarily because they were close to home. Qualitative interviews in Pyay found little evidence that geographic access was constraining the use of contraception, which was in contrast to the interviews in Kalaw, where geography was identified as a major barrier to access and health care provision. With the considerable distances in many of the rural areas and the difficulty of transportation, many potential clients do not have regular access to trained providers. The difficult terrain impacts not only on women's ability to reach the services, but also for providers to reach potential clients through outreach services. In Kalaw, only 13% of providers (n = 46) report providing most of their contraceptive services at the home of the client, compared to 46% (n = 46) in Pyay. In fact, in Kalaw, at least two midwives interviewed expressed concern that they were not able to visit the villages under their jurisdiction as often as was necessary.

One response to issues of physical access is the example of Nan Taing RHC in Kalaw. There is a five-day touring market in the Southern Shan State, to which many men and women travel to sell and buy agricultural produce. One of the sites of this touring market is close to Nan Taing RHC, and the clinic varies the opening days and hours to provide an opportunity for those visiting the market to seek health services. In the qualitative interviews many women and men reported that they would use the opportunity of visiting the local touring market to visit a service provider.

These issues will not be easy to address, without considerable investment in infrastructure and staffing. Putting more resources into providing outreach services for birth spacing may be one solution, but the cost of such an intervention is likely to be high, so some assessment of the cost and impact of such a change in means of service delivery would be warranted.

2.1.2. Economic accessibility

Economic accessibility refers to "the extent to which the costs of reaching service delivery or supply points and obtaining contraceptive services and supplies are within the economic means of a large majority of the target population" (Bertrand *et al.*, 1995). Assessments in Myan-

mar have suggested that cost is a considerable barrier for many women to access and continue use of contraceptives (WHO, 1997; Ministry of Health and UNFPA, 1999). However, in the baseline quantitative survey in Pyay and Kalaw, only 4% of current users reported this as the main reason they chose their specific service provider. In data from the two townships combined, 21.8% of the 427 current users of contraception thought that their method had been either a little or a lot too expensive. However, only 4.0% had chosen their provider because of the cost, and just 3.4% of the 233 past users of contraceptives reported discontinuing because of the cost.

Service providers were asked how much they charge for specific contraceptive services. The average cost of three-month injectables was just over 300 kyats,[4] with oral contraceptives costing around 100 kyats, an IUD insertion approximately 540 kyats, and 10 condoms at 60 kyats. In all cases Kalaw was found to be about a third more expensive than Pyay (Table 4). As shown, public sector basic health staff (BHS) charge little more than drug shops for providing injectables whereas private GPs charge approximately 75% more than either of these providers. The minimum price of daily oral contraceptive pills was considerably cheaper at drug shops than elsewhere, although this may be a result of brand differences.

Table 4
Mean minimum price for specific contraceptive services
by township and type of service provider, kyats (*N*), 2001

	Pyay	Kalaw	BHS	GP	Drug shop	Average
3 month injection	259 (37)	342 (39)	279 (53)	470 (10)	263 (13)	301 (76)
1 cycle daily pills	79 (33)	123 (37)	109 (51)	158 (4)	63 (15)	102 (70)
IUD insertion[a]	432 (11)	613 (16)	556 (26)	-	100 (1)	539 (27)
10 condoms	53 (26)	67 (30)	31 (40)	217 (3)	90 (13)	60 (56)

Note: 710 kyats = US$ 1.
N = providers providing contraceptive services in the past 12 months.
a. IUD = intrauterine device; for drug shops this figure relates to cost of the IUD alone.
Source: Department of Health and Population Council (2002).

4. At the time of the data collection US$ 1 = 710 kyats.

Although the impact of cost on decision to initiate or continue use of contraceptives has not been quantified, it does appear to be an issue of concern to a number of women, and given that there is at least a minimal charge for contraceptives in all sectors, it is likely that the poorest sectors of society may be faced with a considerable barrier. Since the prices are somewhat higher in Kalaw than they are in Pyay, and Kalaw is known to be a less economically wealthy township, this may be a particularly important factor in contraceptive decision making in that township. Recommendations from previous assessments remain valid, with a need for a more systematic evaluation of the impact of cost on access to contraceptive services, and the role that current exemption systems are playing in improving access to contraceptive services for the poor.

2.1.3. Administrative accessibility

Administrative accessibly is the third access issue highlighted by Bertrand *et al.* (1995). They describe this as "the extent to which unnecessary rules and regulations that inhibit contraceptive choice and use are eliminated". There are actually very few rules and regulations associated with contraceptive service provision in Myanmar. The most restrictive of these is that related to the permanent methods of contraception. For a woman to have a sterilization, she has to be at least aged 30, and have at least three living children. If she meets these criteria, she can put in an application to a State/division level sterilization board. Once permission has been received, she can undergo the surgery. Vasectomy is only legally available to men whose wives have received permission to have a sterilization but who are deemed physically unable to go through the surgery. In this situation the man can reapply to the sterilization board for approval for a vasectomy. In the public sector, contraception is officially only provided to married couples. However, no spousal consent or proof of marriage is required. There is no formal regulation of the service provided in the private sector, so no administrative regulations apply to services provided in this sector.

Streamlining of the process for sterilization approval could considerably improve access to this method. One suggestion that should be considered is the decentralizing of the sterilization board from State/division level to township.

2.1.4. Cognitive accessibility

Cognitive accessibility refers to "the extent to which potential clients are aware of the location of service or supply points and of the services available at these locations" (Bertrand *et al.*, 1995). Previous assessments (WHO, 1997; Ministry of Health and UNFPA, 1999) both noted that there are women who are interested in contraceptive use who don't know a source of services. In the survey in Pyay and Kalaw in 1999, women who had heard of specific contraceptive methods were asked what the source of this method might be, assuming that women who hadn't heard of a method wouldn't know the source of the method. Table 5 shows that proportion of women reporting knowledge of specific sources for contraceptive methods. In both townships women were more aware of contraceptives, other than sterilisation, being available in the private than in the public sector. Awareness of availability of contraception in the private sector was greater in Pyay than in Kalaw. Reported knowledge of contraception being available in public sector clinics was very low, although a much higher proportion of women knew that public sector service providers could provide contraceptives outside of the clinic setting (either in the home of the woman, or in the home of the provider).

Table 5
Percent of all survey respondents knowing specific sources of specific contraceptive methods, survey, 1999

	Drug shop		GP		Public clinic		Public provider		Other	
	Pyay	Kalaw	Pyay	Kalaw	Pyay	Kalaw	Pyay	Kalaw	Pyay	Kalaw
3 month injectable	9.6	3.7	64.8	39.9	4.3	17.3	46.2	53.0	0.3	0.6
Daily oral contraceptive	80.9	39.4	29.2	25.8	1.9	10.5	27.3	25.5	0.4	0.6
Condom	15.0	12.5	7.9	9.6	6.3	8.5	7.3	9.6	0.0	0.0
Intrauterine device	1.6	0.3	47.4	20.4	10.9	19.0	36.2	19.8	0.3	0.0
Sterilization	0.1	0.0	13.0	1.4	85.7	70.0	3.3	1.7	0.3	0.0
N	795	353	795	353	795	353	795	353	795	353

Multiple response possible.
Source: Department of Health and Population Council (2000*b*).

Even once a woman has accessed a service delivery point for services other than birth spacing there is not a high level of knowledge that birth spacing services are available at that clinic. In exit interviews with women receiving services other than birth spacing, 19 out of 58 were not able to spontaneously mention that these services can be obtained at the facility, although in the vast majority of cases they were available.

To date in our project, community level advocacy activities have been relatively low key. Following the midterm evaluation in 2001 a set of activities aimed at increasing community awareness of both the importance of reproductive health, and the sources of such services has been initiated, and it is hoped this will show success in improving potential clients' knowledge of the source of services. These activities are being undertaken through the public health staff, but with recognition that for many, private services may be an affordable and more accessible choice. It will be important to undertake such community awareness activities across the country if access is to be significantly improved.

2.1.5. Psychosocial accessibility

Bertrand *et al.* (1995) describe psychosocial accessibility as "the extent to which potential clients are unconstrained by psychological, attitudinal or social factors in seeking out family planning services". Women's and their partner's approval of birth spacing is one issue which may have a limit on their access to services. Women may not be able to raise the necessary financial resources to purchase services and commodities without consultation and approval of their husband. Also, in situations of rural health service provision, where the service provider is often an active and well known member of the community, women may not feel that they could access birth spacing services without the knowledge of their husband. During the survey in 1999, women were asked whether or not they approved of birth spacing, and if they thought their husbands approved. In Pyay, 88.4% of women reported approving of birth spacing, and 77.3% reported that their husbands approved. The respective figures in Kalaw were 74.7% and 69.8%. The sizable minority, a quarter of women in Kalaw, and a little over 10% in Pyay, who disapprove of birth spacing are unlikely to access services. In the rapid assessment, a minority of men and women

were also found to disapprove of birth-spacing. The potential health consequences of contraceptive use rather than moral objections were the main reasons for disapproval of birth spacing. In Pyay there was some discussion about the negative attitudes of family members, in particular in-laws and elders, to birth spacing. The rapid assessment also found that concerns about side-effects featured strongly particularly in discussions among never users of contraception. Other psychosocial factors have not been well documented.

To provide a more conducive community atmosphere for women to access birth spacing services, the community advocacy activities discussed above will not only inform potential clients of the sources of contraception, but will also encourage family members, community leaders and other to be supportive of a woman's choice to use contraception. It would appear that some women are not accessing contraceptive services because of a fear of side-effects. Information on side-effects of contraception and their management therefore needs to be disseminated throughout the community, not just to current users of contraception.

2.2. Quality of care

Bertrand *et al.* (1995) refer to the Bruce-Jain framework for quality of care in family planning, and we use the framework outlined in an article by Bruce (1990) to present quality of care issues.

2.2.1. Choice of methods

"Choice of methods refers to both the number of contraceptive methods offered on a reliable basis and their intrinsic variability" (Bruce, 1990). By providing an appropriate choice of contraceptive methods, the greatest number of clients will be able to use a method that is suited to their social and medical situation. As Bruce (1990) notes, couples pass through many stages in their life when their requirements from a contraceptive may change. At any one time there will be couples who wish to delay their first birth, those who wish to delay their next birth, and those who do not wish to have any more children. Survey data from Pyay indicate that approximately 20% of women of reproductive age have a need for contraception to delay

their next birth, and 65% have a need for a method to limit their family size. In Kalaw the respective figures are approximately 14% and 60%.

Issues such as dual protection from STIs may also be an issue for some clients at some time in their life. Data on STI prevalence and related risk factors is scarce in Myanmar, and there is no specific data available in our two project townships. Perceived and actual experience of side-effects and health impacts of contraceptive use also require that women have a choice of contraceptive methods. Many women in Myanmar, and specifically in the project townships, express a lot of concern about the potential side-effects of hormonal contraceptives, and experience of such side-effects is common (Population Council and Department of Health, 2001).

Four reversible contraceptive methods are theoretically provided through the public sector, three-monthly injectables, oral contraceptive pills, intrauterine devices (IUDs) and condoms. Sterilization is also available to women who meet the necessary criteria and have permission (see above). Together these five methods provide a relatively good balance of long- and short-acting methods, and hormonal and non-hormonal methods. However, previous assessments have indicated that IUD provision is limited, partly because not all basic health staff have been trained and not all clinics have appropriate facilities for providing the services, but also because even trained providers have had little chance to use their skills, and are often nervous of undertaking the procedure. Also, even when other methods are technically provided, stock-outs have been reported to be a common occurrence, therefore limiting the choice of clients.

Data from the midterm situation analysis in 2001 show that short-term methods are provided by more providers than long-acting or permanent methods. Daily oral contraceptives and three-monthly injectables are the methods provided by the most providers (85% and 83% respectively), with condoms being provided by 72% of providers. IUDs are reportedly provided by 38% of providers, and counselling for sterilization and safe period by 56% and 55% respectively (Table 6). Similar data was also collected from the inventory, indicating which contraceptive services are available at each facility (Table 7). The focus on short-term and temporary methods has been noted in other assessments, and is partly the public sector focus on "birth spacing", and partly the infrastructure required for the provision of more long-acting methods.

Table 6
Percent of providers proving specific contraceptive services
in the past 12 months, by township and type of provider, 2001

	Pyay	Kalaw	BHS	AMW	CHW	GP	Drug shop	Total
Any birth spacing service	92	98	93	100	88	100	100	95
Daily pills	80	89	88	43	50	100	100	85
Monthly pills	10	11	0	14	0	0	56	10
Progestin-only pills	0	0	0	0	0	0	0	0
Monthly injection	24	2	2	14	0	50	38	13
2-monthly injection	0	0	0	0	0	0	0	0
3-monthly injection	76	89	91	29	13	100	88	83
Intrauterine device	36	40	52	14	13	20	19	38
Condom	68	77	77	14	50	80	88	72
Counselling for:								
Sterilization	54	57	61	71	25	100	19	56
Vasectomy	34	4	21	14	0	50	6	20
Safe period	56	53	70	43	13	90	6	55
Withdrawal	38	28	45	14	13	50	0	33
Lactational amenorrhea	54	51	64	43	13	80	19	53
Modern methods[a]	6	78	39	43	38	40	44	40
N	50	47	56	7	8	10	16	97

a. Counselling for modern methods was only specifically asked in Kalaw.
Source: Department of Health and Population Council (2002).

Table 7
Number of facilities usually providing specific contraceptive methods
by type of facility, 2001

	STI clinic	MCH	Station hospital	RHC	SRHC	GP	Drug shop	Provider home
Daily pills	0	3	2	7	7	6	16	11
Monthly pills	0	0	0	0	0	0	8	0
Monthly injection	0	0	0	0	0	2	7	2
3-monthly injection	0	3	2	7	8	7	13	12
Intrauterine device	0	2	2	4	1	0	3	2
Condom	1	3	2	7	4	5	13	8
N	1	3	2	8	8	7	16	18

Source: Department of Health and Population Council (2002).

As mentioned above, responses to the questions regarding whether services are "usually" available hide important information regarding the actual availability of services on a routine basis. In 2001, not one of the public sector facilities visited in Pyay had any oral contraceptives, and most did not have injectables, IUDs or condoms. The situation was considerably better in Kalaw. From discussions with service providers in Kalaw, it would appear that the large stocks of contraceptives is unusual. As the UNDP project was coming to a close, a large supply of contraceptives had been provided for distribution to the pubic sector facilities. It would appear that the situation of contraceptive stocks is generally better in Kalaw than in Pyay, however, with fewer than half of all the public sector facilities reporting that they had ever been out of stock of each of the four main contraceptive methods in the past six months. Very few of the drug shops were out of stock of the contraceptives they reported normally providing.

The main issue raised by this data is the need to ensure that, when providers have been trained and are theoretically providing specific contraceptives, they have contraceptive methods available to provide. This is a particular issue in the public sector, and an issue on which further advocacy is necessary with donors. To improve choice for women who wish to limit their births, expanding the training of providers in IUD insertion would be helpful, but this needs to be combined with continuous in-service and refresher training to ensure that the trained providers are comfortable and able to provide a method that is likely to remain a minority method in the contraceptive method mix in Myanmar.

2.2.2. Information given to clients

"Information given to clients refers to the information imparted during service contact that enables clients to choose and employ contraception with satisfaction and technical competence" (Bruce, 1990). To get data on the information imparted to clients it is necessary to observe service delivery. Such observations were undertaken in Pyay and Kalaw townships as part of the situation analysis in 2001. Because of the low client load at many of the facilities visited, there were very few such observations. In fact, just 19 birth spacing interactions were observed, 14 resulting in the prescription of the three-monthly injectable.

During these consultations generally there was little discussion of the range of contraceptives available to the client. The three-monthly injectable was the most likely method to be mentioned (in 15 out of 19 observations), with daily oral contraceptives, IUDs and condoms being mentioned in six or seven of the consultations. Birth spacing information materials were rarely used – a flipchart was only once used, a poster was referred to in two consultations, and pamphlets on birth spacing methods were used in five consultations. Specific information on hormonal methods for the 16 women receiving such methods was limited, with half or just under being told when to start the method, what changes may occur in menstruation, what side-effects could occur, what warning signs to watch for, and what to do if a pill or injection is forgotten (Table 8).

Table 8
Number of birth spacing provider/client observations
in which specific issues were mentioned, by township, 2001

	Pyay	Kalaw	Total
For all birth spacing observations			
3-monthly injectable mentioned	6	9	15
Daily oral contraceptives mentioned	2	5	7
Intrauterine devices mentioned	2	4	6
Condoms mentioned	2	5	7
Birth spacing information materials used	2	4	6
N	10	9	19
For birth spacing observations resulting in hormonal contraceptive provision			
Told when to start methods	4	4	8
Told changes in menstruation	3	3	6
Told what side effects might occur	4	4	8
Told what warning signs to watch for	4	2	6
Told what to do if forget to take method on time	3	2	5
N	8	8	16

Source: Department of Health and Population Council (2002).

Information provided to contraceptive clients at drug shops was even more limited. The mystery client exercises aimed to get some understanding of this, and the general finding was that very little information was given, and even when specific pieces of information were

requested it was not always complete. For example, if the information had not already been offered, once a specific brand of contraceptive had been chosen the mystery client asked "how shall I use them?". Only one out of the 47 drug shops visited for the purchase of either contraceptives or specifically oral contraceptives spontaneously mentioned when in the menstrual cycle to start the pills, and only one third mentioned this when asked how the pills should be used. Drug shop staff were more likely to tell the woman to take the pill daily, although only 15% gave this information without prompting. Very few drug shop staff specifically mentioned the importance of starting a new pack as soon as the old pack was finished (Table 9). The mystery clients were also requested to ask "what should I do if I forget to take one?" if this information wasn't offered. A surprisingly high proportion (67%) of drug shop staff had mentioned this before the question was specifically asked (although always after the question about how the pills should be used). Eligibility criteria, side-effects and possible warning signs were very rarely mentioned (Table 9).

Table 9
Number of drug shops at which the staff gave specific information, by township, 2001

	Pyay		Kalaw	
	Spontaneous	Requested	Spontaneous	Requested
When in menstrual cycle to start	0	7	1	9
Need to take daily	1	21	6	17
Start new pack immediately	0	4	0	1
What to do if forget one pill	16	1	15	0
Any eligibility criteria mentioned	2		0	
Any side-effects mentioned	2		2	
Any warning signs mentioned	1		0	
N	24		23	

Source: Department of Health and Population Council (2002).

2.2.3. Technical competence

"Technical competence involves, principally, factors such as the competence of the clinical techniques of providers, the observance of

protocols, and meticulous asepsis required to provide clinical methods such as IUDs, implants, and sterilization" (Bruce, 1990). Bruce (1990) notes that although clients are often unable to judge this factor, they bear the consequences. She also notes the difficulty in measuring, assessing and publicizing limitations in technical competence of providers. Given that in Myanmar there is a low prevalence of methods that require a high level of technical competence, to adequately assess issues of technical competence and focused clinical assessment would need to be undertaken. To date this has not been done in the two project townships, and as far as we are aware it has not been undertaken systematically elsewhere in the country.

2.2.4. Interpersonal relations

"Interpersonal relations are the personal dimensions of service" (Bruce, 1990). Bruce (1990) notes that interpersonal relations have a significant impact on clients' satisfaction and the possibility of them returning for repeat services. Data from the exit interviews conducted as part of the 2001 situation analysis show that those women who are accessing services are generally happy with the way the provider treated them. All of the birth spacing clients (recognizing the limited value of this data as only 18 and 15 interviews were conducted with such clients in Pyay and Kalaw respectively) reported satisfaction with services, thought the provider was easy to understand, and had enough privacy. We recognise that there is bias in this data, as the clients interviewed had chosen to use the services, and therefore are more likely to have a favourable view of the services than those who are not using the services. In all the observations of birth spacing service delivery, providers greeted their clients in a friendly manner. During the exit interviews, when a client reported that there was another source of services nearby, the most commonly cited reason for not going to that facility was that the client preferred the provider at the chosen facility.

The measures presented here are not particularly good indicators of interpersonal relations. Bruce (1990) presents findings from a number of qualitative studies of provider/client interactions, which seek to describe the situation in regard to interpersonal relations. To further explore the issue of interpersonal relations, such studies could be considered in Myanmar, although the often low client load provides a challenging environment in which to undertake such studies.

2.2.5. Mechanisms to encourage continuity

Bruce (1990) notes that "mechanisms to encourage continuity can involve well informed users managing continuity on their own or formal mechanisms within the program". In the public sector in Myanmar client tracking systems are used to encourage continuity, and the importance of continuity is explained to the clients during counseling. The impact that these have on client continuation has not been documented, although both method switching and taking breaks from hormonal methods have been noted as quite common in qualitative assessments, primarily because of experience or feared side-effects or health consequences.

2.2.6. Appropriate constellation of services

"Appropriate constellation of services refers to situating family planning services so that they are convenient and acceptable to clients, responding to their natural health concepts, and meeting pressing pre-existing health needs" (Bruce 1990). Providing contraceptive services in the context of other specific services could be a help or a hindrance to clients' access. Bruce notes that the appropriateness of a constellation of services is highly dependent on the perceptions and beliefs of clients and potential clients. In Myanmar, no research has been conducted to look at issues related to what constitutes an appropriate service mix. In our two project townships, as well as providing birth spacing services, most facilities report providing some HIV or RTI services, and both adult and child curative services. All facilities report providing antenatal care (ANC), although delivery services were much more limited (Table 10). However, to assess the appropriateness of this broad approach to service delivery, this information would need to be supplemented with data on attitudes and perspectives of community members.

Table 10
Number of facilities providing reproductive health services, by type of service and facility, 2001

	MCH	STI Clinic	Station hospit.	RHC	SRHC	GP
Birth spacing	3	0	2	7	8	7
HIV/RTI services[a]	3	1	2	6	6	7
Antenatal care	3	1	2	8	8	7
Delivery services	1	0	2	4	4	0
Postnatal care	3	0	2	5	4	6
Immunisation	3	0	1	6	8	0
Adult curative services	2	1	2	8	8	7
Child curative services	2	1	2	8	8	7
N	3	1	2	8	8	7

a. RTI = reproductive tract infection.
Source: Department of Health and Population Council (2002).

2.3. Medical barriers

2.3.1. Outdated contraindications

"Outdated and anachronistic contraindications may be over-zealously applied" (Bertrand *et al.*, 1995). This may exclude some women from using their chosen method, when in fact it could be a suitable method. Basic health staff in all townships providing public sector services have received in-service training in contraceptive service provision, and this training includes a review of the most up-to-date information on contraindications. In the two project townships, Pyay and Kalaw, selected private sector staff also receive this training, but this is not routinely the case in other townships. To assess the application of this knowledge in service delivery it would be necessary to observe service provision. While some provider-client interactions have been observed in the two project townships, adequate information has to be gathered to assess this issue.

2.3.2. Other eligibility barriers

Bertrand *et al.* (1995) note that other eligibility barriers may reduce access of some women to particular methods. These "include both formal and informal prohibitions on the use of particular contraceptive methods that may be related to women's age, their parity or the consent of their spouse". In addition to the formal limitations on sterilization and vasectomy, and on the provision of contraception to unmarried women mentioned above, data collected in the project areas indicate that many providers have self-imposed age and parity limits on the provision of particular methods.

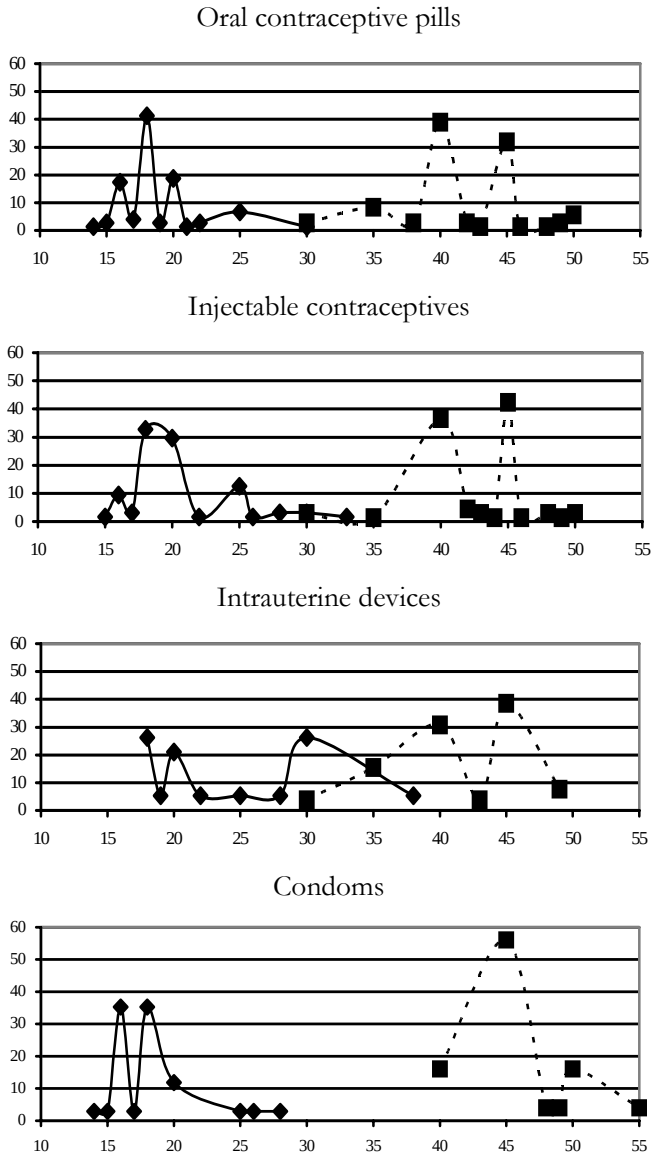
In the situation analysis many providers were found to have a maximum and minimum age, outside of which they would not provide particular methods. For the hormonal methods, around 90% of all providers who provide these methods have a minimum or maximum age for the provision of these methods. This is in contrast to condoms where less than half have a minimum age and close to one third have a maximum age (Table 11). However, when there are maximum or minimum ages for provision of particular methods, these are not highly restrictive. The minimum and maximum ages for each of the methods are shown in Figure 1. The distribution is similar for oral and injectable contraceptives, with mean age ranges of 19 to 42 years and 20 to 43 years respectively. Although the distribution is different, the age win-

Table 11
Providers reporting a minimum age, maximum age, minimum number of children and need to be married for the provision of contraceptives (%), situation analysis, 2001

	Minimum age	Maximum age	Minimum number of children	Provide to unmarried women	*N*
Daily pills	93	89	17	38	82
Injectables	83	92	38	27	78
Intrauterine device	54	74	71	3	35
Condoms	49	36	4	46	69
Sterilisation	62	64	87	0	45

N = providers providing specific contraceptive services in the past 12 months.
Source: Department of Health and Population Council (2002).

Figure 1
Minimum and maximum ages reported by providers
for the provision of various contraceptive methods, situation analysis, 2001



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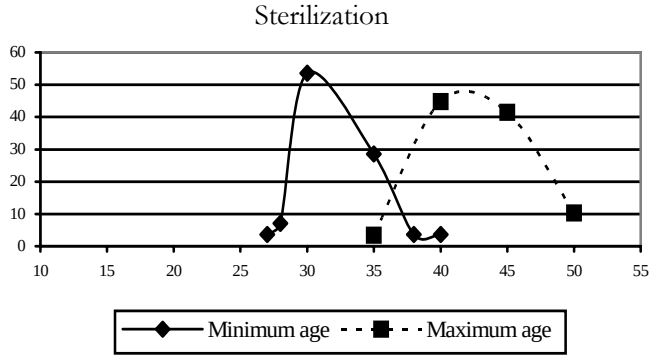

Source: Department of Health and Population Council (2002).

dow during which IUDs would usually be provided is also similar, from a mean minimum age of 24 years to a mean maximum age of 42 years. Condoms are available to the widest age range of individuals, the minimum mean age being 18 years and the maximum mean age being 46 years. Sterilisation has the narrowest age band, primarily because of a higher minimum mean age (32 years). The mean maximum age is similar to the other methods, at 42 years.

Continued engagement with service providers could help to reduce the number of providers who will not provide specific methods to younger or older women. From qualitative assessments and research in Myanmar, it appears that age and parity limitations placed on provision of methods is primarily a result of concerns with side-effects and long-term health effects, so focusing on reassuring providers of the low health risks and teaching them to providing counselling and appropriate management of side-effects would be an appropriate strategy to take.

2.3.3. Process or scheduling hurdles

"Process hurdles include physical examinations and laboratory test that clients must undergo in order to obtain contraceptives" (Bertrand *et al.*, 1995). These would not appear to be a great barrier to access in Myanmar. Where providers have been trained in contraceptive service provision, they utilize the medical eligibility criteria set out by WHO, with many of the criteria being assessed verbally. In the observations of birth spacing service provision, two out of the 19 women were weighed,

12 had their blood pressure taken, six had a general physical exam, three had a pelvic exam and one had a breast exam. None of these clients had their temperature taken, or had a pregnancy or blood test.

2.3.4. Service provider qualifications

Bertrand *et al.* (1995) note that service provider qualification include "limitations on the type of personnel who can deliver a certain method, when in fact individuals with less education … can be trained to perform the task". In Myanmar, LHVs and midwives are trained to provide the four official methods, three-monthly injectables, oral contraceptive pills, IUDs and condoms. Voluntary health workers, however, only provide oral contraceptives and condoms. The potential ability of these volunteers to provide more "medical" methods such as injectables is unclear, as is the extent to which this could improve access.

2.3.5. Provider bias

"This barrier includes the practice of favoring some methods and discouraging others in the absence of a sound medical rationale, as well as failing to ascertain and to respect the client's preference" (Bertrand *et al.*, 1995). In the interviews with providers, a number of questions were asked to determine providers' perspectives on the value of specific contraceptive methods for birth spacing or limiting. Approximately 85% of providers said that there are particular methods they would provide for a woman wanting to space her next birth, and for one wanting to limit her family size. However, in most cases a wide range of methods was reported to be provided (Table 12). Table 12 also shows that there are very few methods that most providers would never recommend. The greatest number of providers reported never recommending the monthly methods, which have unproven safety and efficacy. Surprisingly, over a quarter of providers report recommending sterilization as a method of birth spacing, which may indicate a problem in the understanding of this question.

These findings contrast somewhat with qualitative data from the two townships, when many providers said that they believed that women would forget to take daily pills regularly, and would therefore advise women to use injectables.

Table 12
Percent of providers recommending specific methods for women wanting to space or limit their births, never recommending specific methods, 2001

	Recommended for birth spacing	Recommended for limiting	Never recommended
Daily pills	96	34	3
Monthly pills	34	1	84
Progestin-only pills	1	0	8
Monthly injection	10	0	62
2-monthly injection	1	1	30
3-monthly injection	91	47	0
Intrauterine device	73	54	3
Condom	87	36	0
Sterilization	27	79	5
Vasectomy	14	22	8
Safe period	52	17	3
Withdrawal	28	10	2
Lactational amenorrhea	30	7	0
Emergency contraception	0	0	0
Other	8	0	18
N	79	82	63

N = providers reporting particular methods recommended for spacing or for limiting, or never recommended.
Source: Department of Health and Population Council (2002).

2.3.6. Inappropriate management of side effects

"Providers sometimes recommend that a client who is experiencing minor side effects that may or may not be related to the method she is using simply discontinue use of her chosen method, rather than adequately counsel the client and help her manage the side effect" (Bertrand *et al.*, 1995). We have little data from which to assess this issue, although in the study of reproductive morbidities in Pyay and Kalaw, as well as other assessments in other parts of Myanmar (WHO, 1997), experience of side-effects was one of the major reasons for women switching or discontinuing contraceptive use. The extent to which providers are consulted about side-effects, and the support they give to women is unclear. In many cases it would seem that women make the decision to stop or change their contraceptive method be-

cause of side-effects without consulting with a provider. This may indicate that women are not given appropriate information regarding what to expect with regard to side-effects, and not encouraged to return to the provider if they have concerns.

3. Discussion

As discussed by Bertrand *et al.* (1995), there is a wide range of factors affecting access to and quality of reproductive health services. In our review of data available from the project *"A Township Model for Improving Quality of Care in Reproductive Health Services in Myanmar"*, we find that using the model proposed in this paper, there are a number of areas in which we have adequate information to inform programme development, and other areas where such information is scarce. Here we briefly discuss some of the programmatic recommendations and where relevant how our project is addressing these issues. We also highlight the gaps in information, propose areas for future research, and discuss some of the constraints to data collection.

A number of the access related issues identified would require changes in policy or implementation at the central level. For example, at least in some townships, difficult geographic access to services is a major barrier to women using contraceptives. However, interventions to improve this situation will not be easy to implement at the project or township level, as they are likely to require systemic changes in the way services are provided. To address this issue there may need to be a shift from the focus of providing services in the facility with limited outreach services, to the focus being on the provision of services in the community. This may require additional support in terms of the number of staff providing services, particularly in rural areas. Issues of administrative accessibility will also need to be addressed at the central level, particularly when increasing access would involve a change in policy or procedures such as for the streamlining of the sterilization approval process. Putting in place systems that will ensure that the poor have access to safe and effective methods of contraception will also require central level initiation, although they could be implemented on a township or even clinic level. Other issues such as increasing the availability of contraceptive commodities will require fund

mobilization, either at the central government level, or through international donors.

Other access issues could be addressed at the township level, and it is generally these issues that are being addressed within the scope of the project *"A Township Model for Improving Quality of Care in Reproductive Health Services in Myanmar"* in Pyay and Kalaw. As mentioned above, there are a number of potential clients of birth spacing services who may not be using contraception because they do not know where such services are provided. Although probably a small minority of women, others may feel constrained by personal and societal attitudes towards the use of contraception. Both of these issues can be addressed through community level advocacy activities. Within the project, basic health staff and voluntary health workers are using an advocacy booklet in discussions with community leaders to raise awareness of reproductive health issues in the hope of producing a more conducive environment for potential clients to seek out and utilise services.

The project also has a health services component that is beginning to address some of the access issues related to quality of care. The project has developed training curriculum for basic health staff, auxiliary midwives, community health workers, private GPs and drug shop staff. The focus of the training curriculum is on birth spacing and RTIs, but issues related to emergency contraception, abortion, safe motherhood, adolescent reproductive health and men's role in reproductive health have been included. The training is client-oriented and aims to strengthen client counselling through the use of role-play techniques. One round of training took place in 2000, and refresher training is currently underway. By updating the knowledge and skills of providers it is hoped that there will be an improvement in quality and access issues such as the information given to clients, and their interpersonal relations with clients. The training is also an opportunity to update providers' knowledge in terms of contraindications and the management of side-effects, and to discourage provider bias in contraceptive method choice and inappropriate limitation of access to contraception based on age, parity of socio-economic groups.

Within the Bertrand *et al.* (1995) model there were a number of issues that we did not have sufficient information to assess, either in the two project townships, or in Myanmar more generally. Most of these are related to the actual content of service provision, and the relationship between providers and clients. While important information

was identified during the survey and in-depth interviews, to adequately address issues such as the technical competence of service providers and the interpersonal relations with clients, client/provider interactions need to be observed. As part of the data collection for both baseline and midterm in our project we have included a number of observations of service delivery. However, because of relatively low client loads and the limited time available for fieldwork, only very few such observations were conducted. Although this gives some indication, there is not sufficient data to allow strategic decisions to be made to improve the quality of services. While such information would be valuable for programme planning, the logistical barriers to data collection may make this particularly difficult.

On the other hand, there are other gaps in the available data on access and quality of care that may be more easily addressed. Further analysis into the role that cost factors play in a woman's choice to use contraceptives and in her selection of specific methods or service providers is one such area. Looking in more detail into women's demands and expectations regarding the constellation of services provided is another.

References

BERTRAND, J. T., K. HARDEE, R. J. MAGNANI and M. A. ANGLE (1995), "Access, quality of care and medical barriers in family planning programs", *International Family Planning Perspectives*, vol. 21, no. 2, p. 64-69 and 74.

BRUCE, J. (1990), "Fundamental elements of the quality of care: A simple framework", *Studies in Family Planning*, vol. 21, no. 2, p. 61-90.

DEPARTMENT OF HEALTH and POPULATION COUNCIL (2000*a*), *Rapid Assessment Report* (draft).

DEPARTMENT OF HEALTH and POPULATION COUNCIL (2000*b*), *Baseline Survey Report* (draft).

DEPARTMENT OF HEALTH and POPULATION COUNCIL (2002), *Midterm Evaluation Report* (draft).

MINISTRY OF HEALTH and UNFPA (1999), *A Reproductive Health Needs Assessment in Myanmar*.

MINISTRY OF IMMIGRATION AND POPULATION and UNFPA (1999), *Fertility and Reproductive Health Survey, 1997*.

POPULATION COUNCIL and DEPARTMENT OF HEALTH (2001), *Perceptions of Reproductive Morbidity Among Women, Men, and Service Providers in Pyay and Kalaw Townships in Myanmar*, Population Council, Bangkok.

SPICEHANDLER, J., and R. SIMMONS (1994), *Contraceptive Introduction Reconsidered: A Review and Conceptual Framework*, World Health Organisation, Geneva.

WORLD HEALTH ORGANIZATION (1997), *An Assessment of the Contraceptive Method Mix in Myanmar*.

10

INDUCED ABORTION IN VIETNAM: FACTS AND SOLUTIONS

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1. Background

Aware of the pressure of overpopulation in Vietnam, the Vietnamese government stepped up its activities from the end of the 1980s to reduce the rapid population growth rate in order to improve socio-economic conditions in the country. This resulted in a sharp decline in the fertility rate from 3.8 in 1989 (Census 1989) to 2.3 in 1999 (Census

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3. This report is based on the data of a research project carried out in 2001: "The factors that influence the decision to have an induced abortion in Vietnam", conducted by the Center for Population Studies and Information of the Committee for Population, Family and Children in Vietnam (VCPFP) (formerly the National Committee for Population and Family Planning - NCPFP). It also includes findings from other current research reports in our office and in Vietnam.

We are grateful to all collaborators at the VCPFP, as well as the women, young people, health workers and managers who were willing to be interviewed for the research reported here. We would also like to express our special thanks to the CICRED for providing us with an opportunity to attend this international seminar.

1999). This achievement led to Vietnam's receiving a Gold Medal at the 1999 United Nations Population Award ceremony. This decline in the fertility rate also surprised many researchers, since it took place in one of the poorest countries in the world and despite government cutbacks in health expenditures (World Bank, 1992; Houghton, 1997).

That same period saw a worldwide increase in the rate of induced abortion (IA) (Tietze, 1983; Bongaarts, 1990), with similar changes occurring in Vietnam (Houghton, 1997; GSO, 1997). Indeed some studies found that the induced abortion rate in Vietnam is the highest in the world. Although induced abortions are not regarded as a contraceptive method in the Family Planning (FP) Program in Vietnam, many women take advantage of this method to terminate unwanted pregnancies, disregarding the negative health consequences it entails. In the current context, in the average household, the desired number of children has declined, while the provision of contraceptive methods as well as abortion services have failed to meet the increasing needs of women and couples.

To provide essential information to improve the quality of reproductive health and family planning and to reduce the abortion rate in Vietnam, research on induced abortion was conducted in 2000 by the National Committee for Population and Family Planning (NCPFP) (now the Vietnam Committee for Population, Family and Children - VCPFC). The objective of this research was to determine what factors influence decision-making as regards gaining access to induced abortion services. This research also attempted to determine the quality of relevant services provided in Vietnam.

This report will address issues such as: 1) the factors influencing women's decisions to access induced abortion services; 2) the impact of FP and health services on induced abortion in Vietnam; and 3) special attention will be placed on unmarried youth and adolescents and the prevalence of abortion in this group.

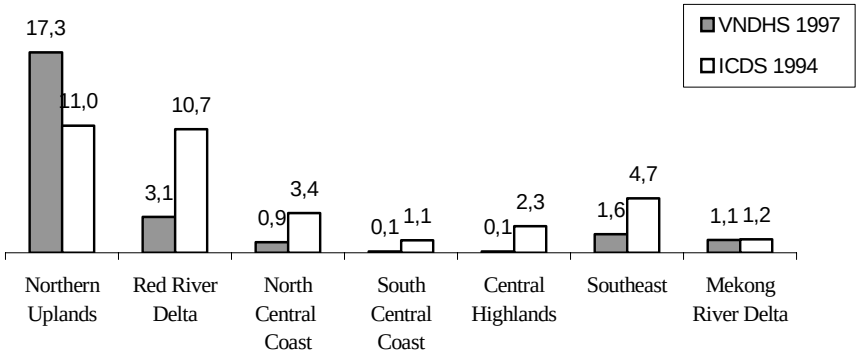
2. Sources and methodology

This report is based on data from the research project "The factors that influence the decision to obtain induced abortion in Vietnam", conducted by the NCPFP. The aim of this study is to determine the factors that influence the decision to access health services in order

to undergo induced abortion, to examine the attitude of service providers toward IA clients, and to provide recommendations for FP policies. Because this survey collected information on women who had had an induced abortion at some time in their lives, no estimate of IA rates is presented in this study.

According to the 1997 Vietnam Demographic and Health Survey (VNDHS 1997) and the 1994 Inter-Censual Demographic Survey (VNICDS 1994), the Northern Uplands[4] (one of the poorest regions in Vietnam) and the Red River Delta region were regarded as having the highest abortion rates in Vietnam (see Figure 1). Therefore, Cao Bang province (in the Northern Uplands region) and Ninh Binh (one of the poorest provinces in Red River Delta region) were chosen for this study.

Figure 1
Percentage of ever-married women aged 15-49 who underwent IA, by main regions in Vietnam



Sources: Vietnam Demographic and Health Survey 1997 (VNDHS 1997) and Vietnam Inter-Censual Demographic Survey 1994 (VNICDS 1994).

4. At the time of the survey, Vietnam was divided into seven regions, the Northern Uplands and the North Central Coast being the two poorest regions. In 1999, three quarters of the rural population did not have year-round access to all-weather roads and markets and half had no electricity (see table below).

Regional distribution of public expenditure 1996-1998

Region	% of expend. by year	Region	% of expend. by year
Northern Uplands	8.0	Central Highlands	5.1
Red River Delta	24.6	Mekong Delta	15.5
North Central Coast	9.5	Southeast	26.3
South Central Coast	11.5	Total	100.0

Source: Vietnam Standard of Living Survey 1998.

Because approximately 80% of the population lives in rural areas in these provinces, four rural communes in two districts and one urban commune in a provincial town were chosen in each province. Based on the reports of FP collaborators in each commune, 60 women aged 15-49 who had ever been married (including widows and divorcees) and had undergone an abortion between 1995 and 2000 were randomly selected for an interview. In total, 600 women were interviewed using the individual questionnaire.

In addition, 4 local adolescent groups were included in focus group discussions, and 19 managers of district health centers, hospitals and clinics, and health workers who performed induced abortion were interviewed in depth. Most health services that perform induced abortions, from commune to provincial levels, were observed.

The design of the individual questionnaire was based on a conceptual framework for analyzing the determinants of maternal mortality and morbidity proposed by McCarthy and Maine (1992). The variables used to investigate the factors influencing induced abortion are as follows:

i. Individual: age, education, parity, socioeconomic level, ethnicity, and number of living children;
ii. Community characteristics (differences between the provinces and regions);
iii. Program factors (family planning and health services).

3. Family planning and abortion policy in Vietnam

The results of the 1960 Vietnam census showed the Government of the Democratic Republic of Vietnam that a large, growing population was creating pressure on the land. This fact led the Vietnamese government to draw up a population policy with a target of three children per family, mainly to reduce the population growth rate in the north (Jones, 1984, p. 216; NCPFP, 1990). Unfortunately, due to the war, and the pro-natal viewpoint of some leaders of the government, the FP Program was implemented slowly.

In 1981, the Council of Ministers confirmed the importance of the FP Program as part of national population policy and also recognized that this program is an element in the social movement to improve the population's quality of life. Three specific guidelines were issued: (a) each couple should have only three children; (b) birth intervals should

be 3-5 years or more; (c) married women should give birth only at age 22 years or later (UNFPA, 1990).

The 1989 Law on People's Health Protection stressed that:

> ▪ *A woman has the right to undertake IA at her request, to have access to health care services for checking and treating gynecological diseases, to have access to prenatal and delivery care, and to be assisted at delivery by health services.*
>
> ▪ *The Ministry of Health has the responsibility to sustain and develop the network of gynecological, obstetric and neonatal care in the community and to provide reproductive services for every woman.*
>
> ▪ *Performing the IA procedure and inserting an IUD as part of public or private health services without a license from the Ministry of Health or Health Department at provincial levels is prohibited.*
>
> (Code No. 44, Chapter VIII: Implementing FP and Maternal and Child Health Protection).

Despite this law, before 1995, the NCPFP policy was to fully subsidize abortion services for women registered as having experienced modern contraceptive failure (WHO, 1999, p. 44). In 1991, the Vietnamese Council of Ministers entrusted the NCPFP with the responsibility of implementing the FP Program in conjunction with other related agencies. Other agencies were involved so as to secure the participation of mass organizations in FP in order to achieve the population and FP targets.

The VNDHS 1997 shows that fertility in Vietnam has been falling significantly, since the total fertility rate (TFR) is now 2.3 and the contraceptive prevalence rate (CPR) 73.5%, indicating the success of the FP Programs. IA issues, however, were overlooked by the Vietnamese FP and health managers. This issue was not recognized until 1994, when several international reports pointed out the high rate of IA in Vietnam (Goodkind, 1994). Since these reports were published, many studies and surveys on IA have been implemented (Table 1). At present, the exact rate of IA is still controversial, and it varies according to the data sources used.

The IA rate varies significantly between the various regions in Vietnam, ranging from the highest to the lowest rates worldwide (VNICDS 1994, VNDHS 1997) (Figure 1). In contrast to the average world situation, women in rural areas in Vietnam have a higher rate of IA than in the urban areas (VNDHS 1997). Thus, for instance, in the Northern Uplands region – one of the poorest rural regions in Vietnam –, the IA rate is extremely high (Nguyen and Hoang, 2000, p. 31-40).

Table 1
Total Fertility Rate (TFR), General Abortion Rate (GAR),[5]
Abortion Ratio (AR),[6] and Total Abortion Rate (TAR)[7]
of entire country, urban and rural, 1994 and 1997

Sources	Indicators	Entire country	Urban	Rural
VNICDS 1994	TFR	3.1		
	GAR (0,000)	15.5	19.6	14.4
	AR (0,000)	163.6	299.5	138
	TAR	0.6	na	na
VNDHS 1997	TFR	2.3	1.59	2.54
	GAR (0,000)	16.78	11.03	18.18
	AR (0,000)	161.71	154.36	162.98
	TAR	0.59	0.36	0.65

Sources: GSO, 1997; NCPFP, 2000.

Health and FP services provide inadequate care, which in turn leads to unmet contraceptive needs and a high rate of contraceptive failure. There is also a high rate of IA complication, indicating a high rate of unsafe abortion practices (Do and Stoeckel, 1993; Johansson *et al.*, 1996).

Moreover, recent socioeconomic development in Vietnam has brought about changes in the lifestyles of Vietnamese youth and adolescents, particularly of young women. Prevailing social attitudes also cause young women to seek IA to terminate their unwanted pregnancies, potentially contributing to more serious problems for reproductive health in the future.

Other factors, such as women's comparatively low educational attainment, cultural attitudes, religion, the sex of living children and easy access to health services to obtain abortions also contribute to the high rate of induced abortion. It is also alarming that managers of health and FP programs are failing to improve the quality of care and

5. GAR(t) = (Number of induced abortions in year t × 1000)/(Number of women aged 15-49 in year t).

6. AR(t) = (Number of induced abortions in year t × 1000)/(Number of pregnancies in year t).

7. TAR: Number of induced abortions that would be experienced by the average woman during her reproductive lifetime, given present age-specific abortion rates.

service provision, while health regulation reform has yet to focus on reducing the IA rate and improving women's health status.

4. The findings

This report presents the main results of the study, dividing the findings into three parts: 4.1) the factors influencing women's decisions to access induced abortion services; this part describes the results from the individual interviews of married women; 4.2) the impact of FP and health services on induced abortion in Vietnam; this part combines the results from the individual interviews, in-depth interviews and observation of the services; 4.3) views of unmarried youth and adolescents on induced abortion; the information in this part was drawn from focus group discussions by youth and adolescents aged 15-22.

4.1. Factors influencing the decision to access IA services

4.1.1. Parity

Like the 1997 VNDHS, the survey indicated that a large proportion of women who sought abortion reported that the reason for IA was to limit the number of children (81% of the women who underwent IA during 1994 and 1997). As for pregnancy spacing, only 16% gave this reason for obtaining an induced abortion, while only 3% of those who had had an abortion wanted to have a child immediately. Furthermore, women who underwent IA had more living sons (mean number of sons: 1.5) than living daughters (mean: 1.3). These facts suggest a significant preference for sons (*t*-value: -3.16; $p<0.005$).

4.1.2. Socioeconomic characteristics of women obtaining abortions

Generally speaking, women in developing countries who seek an IA tend to have high levels of educational and work status (Tietze, 1983; Dixon-Mueller, 1990; Armstrong and Royston, 1989). A similar pattern is found in Vietnam, where the more educated women are more likely to have an abortion (VNDHS 1997 and VNICDS 1994). However, the repeat abortion rate of women who have completed primary school level was higher than among those who had failed to

complete primary school or had had no education, and even slightly higher than those with secondary and higher education levels. Although educational attainment influences the decision to seek pregnancy termination, it has no clear relationship with repeat abortion (Table 2).

Table 2
Percentage of currently married women who had IA during lifetime and IA and repeat abortion between 1994 and 1997, by educational attainment and type of occupation, 1997

Characteristics of women	Ever abortion	Abortion 1994-1997	Repeat abortion 1994-1997
Education			
No education	6.23	2.62	0.66
Incomplete primary	13.57	4.49	1.80
Complete primary	18.76	8.74	4.92
Incomplete secondary	23.48	8.47	4.15
Complete secondary	30.45	11.84	3.72
Higher	48.72	10.26	1.71
Occupation			
Group 1	39.62	8.89	0.54
Group 2	23.13	7.27	2.72
Group 3	19.07	8.30	4.33
Group 4	18.75	3.13	0.00
Total	21.79	7.96	3.51

Source: VNDHS 1997.

In this report, occupations are divided into four groups[8]. A large number of women who underwent an IA worked in Group 1. This was probably partly due to the fact that these women were more motivated

8. Group 1 includes the leaders of the communist party at local and central levels; non-governmental organizations; factory managers (both in government, private and cooperative sectors); professionals; persons working in health sectors (including baby-sitters and cleaners); administrators, clerks, secretaries, technicians, teachers, etc. Most of them are engaged in government jobs.

Group 2 includes blue-collar workers and those in service sectors.

Group 3 includes those working in forestry, fishing and agricultural sectors.

Group 4 "undefined" includes the unemployed, housewives, students, and military forces.

to control their family size, and they may also have been under strong pressure at work to follow the FP policy. The workplace is therefore likely to influence a woman's decision to terminate her unwanted pregnancies.

4.1.3. Women's views on induced abortion

Although IA is not regarded as a method of contraception, before the 1990s many women regarded abortion as a kind of FP: the phrase "family planning fails" means "unwanted pregnancy", hence the term "apply family planning" was interpreted by many women as undergoing "induced abortion". Since the 1990s, however, the media have been extensively used to make women aware and warn them of the risks associated with induced abortions. Consequently, few women regard IA as a good FP method.

Only 6.8% of the women who also were not using any contraception method at the time of the survey stated that they thought IA was a good family planning method and that it was easy to access IA services. Some women even stated that the procedure was quick and convenient. These women were not using any contraceptive method at the time. Although this percentage is low, it still indicates a problem in the IEC program in order to reduce the use of induced abortions.

4.2. The uses of family planning and abortion services

4.2.1. Number of induced abortions in public services

86% of the women stated that they used public health services for undertaking an induced abortion. Only 14% used private services, although this figure has increased over time. The research team also discovered that the role of private and public services was unclear, particularly in the Ninh Binh Province (Red River Delta Region). While the managers of a district public health center declared that the number of IAs in their services was falling dramatically, many women admitted that they went to public hospitals or clinics to meet "relatives" to terminate their pregnancies. They paid less than the hospital fee required and were not registered in the hospital records. In fact, this was a kind of semi-private service, meaning that a number of induced abortions in public hospitals were not recorded in public health records.

4.2.2. Abortion service fees

In the IA Survey 2000, 75.8% of the women said that they were charged for abortion services during the five years from 1995 to 2000. Farmers' wives who were not covered by any health insurance had to pay for these services in cash. However, those working in the public sector also paid abortion service fees themselves and did not use their health insurance to cover these fees.

The NCPFP had a policy to fully subsidize abortion services for women registered as modern contraceptive users who had experienced contraceptive failure. However, neither clients nor providers were willing to apply for this subsidy, since it was extremely difficult to obtain the payment for it.

Fees charged to clients for menstrual regulation ranged from 15,000 to 75,000 VND (approximately USD 1 to USD 5)[9] in the public sector, depending on the type of procedure and the number of weeks of gestation. Fees were charged for the IA procedure and a few types of medication for pain control and post-procedural antibiotics. All additional services were provided at extra cost. There was no standard fee for the whole country. For example, in the Cao Bang and Ninh Binh provinces, the fee was 20,000 VND for menstrual regulation, whereas it was only 10,000 VND in Hanoi.

In the private sector in urban areas, clients were charged a much higher fee than in the public sector (usually 100,000 VND). However, many urban women said that they were satisfied with these services, since the fees are more transparent, the care is of a higher quality and there is a shorter waiting period than in the public sector.

However, there are some services that are of a semi-public nature. Semi-private providers are public sector employees who use public facilities during non-working hours, which makes it difficult to evaluate this kind of service. For example, some clients stated that they paid only 15,000 VND for a menstrual regulation procedure at the district hospital, while it normally costs 20,000 VND. In these cases, the providers stated that they were "relatives" and did not pay the hospital for the facilities used, as mentioned in section 4.2.1.

Opinions about the cost of IA services depended on the clients' employment and income. Most clients (about 80% of whom were

9. At the time of the survey, 1 USD=14,500 VND.

women) said that prices in the public sector were fair. Even clients who underwent an IA in the private sector agreed that prices were moderate.

Some providers and policy makers suggested during the in-depth interviews that increasing IA service fees would not encourage women to use safer services. They felt it would lead women to seek illegal, dangerous methods to terminate their unwanted pregnancies. This also would result in the loss of an important opportunity for the public sector to provide counseling and contraceptive services for women who wish to control their fertility.

4.2.3. Pregnancy examination

According to the NCPFP, many women complained of undergoing an IA without having been given a pregnancy test. (The Vietnamese term is *"hut gio"*, meaning "to suck out air".) In addition, the term *menstrual regulation* was translated into Vietnamese as *"hut dieu hoa kinh nguyet"*. This leads many women, and even certain providers, to misunderstand this method as being concerned with helping women to keep their menstruation regular. Moreover, 74% of the women who had ever undergone an abortion between 1995 and 2000 in two pilot provinces self-diagnosed their pregnancy and automatically sought an induced abortion. Another 17.8% were diagnosed by health workers but not tested in the laboratory, 5.9% were tested by clinical services, and 2.3% used the pregnancy quick stick (see Table 3).

Table 3
Percentage of women who have had abortions
and type of pregnancy diagnosis, 2000

Type of pregnancy diagnosis	% of women having abortions
Self-diagnosed	74.0
Commune health workers	17.8
Health services	5.9
Quick stick test	2.3
Total	100.0

Source: Induced Abortion Survey 2000.

The vast proportion of women who underwent an IA without clinical testing had already experienced at least one pregnancy. Most of these women were 20 years old or above, and from the less educated and lower income group. Moreover, the number of urban women tested for their pregnancies at health service facilities was a third larger than the number of rural women. This difference can be explained by the fact that most health facilities in rural areas provide relatively poor quality care, while the equipment at these facilities is also comparatively limited.

During the in-depth interviews, the women stated that they were certain they were pregnant, without the need for confirmation by health workers. One woman even said:

> "I realized that if I visited a health worker, he/she would confirm it like I did. So I did not need to visit health services for pregnancy testing. I just wait for a clinical mobile team to arrive in our commune health center and then I ask for menstrual regulation…"

Since this problem was detected, the quick stick for testing pregnancies has been widely provided by the FP Program since 1998 in order to prevent women from undergoing IA without actually being pregnant. However, only 2.3% of the women used it. This should remind FP managers to ensure the efficient distribution and use of the quick stick for pregnancy testing.

4.2.4. Quality of services

Counseling is one of the weak points of health services in Vietnam. In the past, most providers neglected to provide counseling before, during and after an IA was performed on a client (WHO, 1999). Warnings of the health risks associated with IA in IEC activities in the mass media and health services have changed since the middle of the 1990s. This change reflects the efforts of the managers and the policy makers in a changing social and economic situation. Approximately 80.5% of the clients stated that providers warned them, before they had an abortion, about the serious health consequences that may arise from having an induced abortion (see Table 4).

However, during the in-depth interviews, many women argued that, although they knew that having an IA was dangerous, they had no choice but to terminate their unwanted pregnancies. Some women were able to describe, either briefly or in detail, the IA complications.

Table 4
Percentage of clients according to type of advice received from providers, and by rural and urban, 2000

Health workers' actions		Rural %	Urban %	All %	Number of women
Warning of health risk	No	12.7	38.1	19.5	117
	Yes	87.3	61.9	80.5	483
Advice on dealing with complications	No	10.5	28.1	15.2	91
	Yes	89.5	71.9	84.8	509
Ask to follow up care	No	21.6	36.3	25.5	153
	Yes	78.4	63.8	74.5	447
Advised to use contraceptives	No	7.5	13.8	9.2	55
	Yes	92.5	86.3	90.8	545
Total		100.0	100.0	100.0	600

Source: Induced Abortion Survey 2000.

However, they thought that these complications were rare and said that the warnings by the health workers made them nervous and tense.

A total of 84.8% of the clients stated that, after the induced abortion, the providers had described the symptoms associated with complications, symptoms that were easy to identify. 74.5% of the clients were advised to return to receive post-abortion care, especially those in the state-run clinics. However, not all those interviewed acted on this advice. Most IA sites, including provincial hospitals, had no counseling room. In some district hospitals, there was not even enough room to attend to the clients.

Compared with the situation in the early 1990s, counseling services were considerably better in the late 1990s. However, this service is still not quite as comprehensive as it needs to be in terms of the quality of care provided.

4.2.5. Contraceptive use prior to induced abortion

Nearly half the clients stated that they had used contraceptive methods during the month prior to becoming pregnant (41% of the women), a fact that can be related to high contraceptive failure and resulting in an increasing IA rate (Table 5). The failure of contraceptive

Table 5
Percentage of women using contraceptive methods
a month prior to the induced abortion,
current use of contraception in 2000
and contraceptive prevalence rate (CPR) in 1997 (%)

Contraceptives	Before abortion*	Currently using 2000*	Contraceptive prevalence in 1997**
Did not use	59.0	10.0	24.7
Pill	6.0	12.0	4.3
IUD	17.0	55.0	38.5
Injection	na	0.2	0.2
Condom	6.0	9.0	5.9
Female sterilization	na	6.0	6.3
Male sterilization	na	na	0.5
Traditional methods	12.0	8.0	19.2
Other	na	na	0.3
Total	100.0	100.0	100.0

Sources: *Induced Abortion Survey 2000; **VNDHS 1997.

methods is largely attributed to the use of traditional contraceptive methods in many studies in Vietnam (Do and Stoeckel, 1993; Johansson *et al.*, 1996; Phan and Truong, 1996; Trinh, 1997; Nguyen and Hoang, 2000), and while the IUD is often regarded as having lower failure rates, according to our survey's findings, this method has a comparatively high failure rate in the Vietnamese FP Program.

Although at least some kind of contraceptive method was available in almost all facilities providing abortion services in the public health system – contraceptives such as IUDs and the pill –, only a limited range of contraceptives was available. For example, only some services had condoms, but no site had contraceptive injections and sterilization was only available at FP Program facilities.

Most health workers complained that contraceptive distribution was not always timely. They tend to choose only IUDs, the pill and condoms. Women had less choice of suitable contraceptives, which in turn increased the risk of experiencing an unwanted pregnancy. Many health workers also stated that the reason for not using a contraceptive was the side effects. When clients asked for a change from the method

they were currently using, an alternative contraceptive was often not available at the health services. This resulted in the use of contraception being discontinued by the client. As a senior doctor in a provincial hospital stated: "Accessibility to the IA services is too easy, while availability of contraceptive methods is so much trouble in my services" (Dr. Nguyen T., deputy director of MCH center). They also called for innovation in the distribution of contraceptives as well as improvements in the capacity of FP providers.

The failure of contraceptive methods leads women to seek induced abortions. This naturally raises questions as to the adequacy of the delivery of contraceptives and follow-up services under the FP Program.

4.2.6. Complications

It is often difficult to collect reliable information on diseases in developing countries, since this depends on the definition as well as the perception of the disease on the part of the questionnaire designers, the interviewers and interviewees. Although the questionnaire in the VNDHS 1997 cannot provide details of all types of complications related to induced abortions, the data in this survey show a high level of complications from induced abortions – 32.2% of the women who underwent an IA suffered from complications (Table 6). Therefore, in the IA Survey 2000, this part of the questionnaire was carefully carried

Table 6
Percentage of women who reported complications related to induced abortion 1997 and 2000

Complications	1997	2000
Infertility	0.2	0.8
Infection	2.2	7.7
Bleeding	6.4	9.0
Pelvis pain	6.9	11.0
Others	20.0	na
Do not know	0.4	na
Total	36.1	28.5

Sources: Induced Abortion Survey 2000; VNDHS 1997.

out in order to determine as accurately as possible the number of complications relating to induced abortions. All the unclear symptoms were excluded from the data. The rate of complications from this study was quite high (28.5%), suggesting that unsafe abortions are a serious problem in the health service system.

In particular, only 0.8% of the IA cases in this study described their current situation as "not having menses" or "waiting for another pregnancy, however, it is likely to be difficult". These women had waited for another pregnancy for two years, but did not think that they were at risk of infertility, and therefore the main problem is that although women knew an IA might be harmful to their health, they did not think it would affect their fecundity.

According to the providers of all the IA services investigated, the most complicated cases relating to IA were those in which there had been reproductive tract infections (RTIs) prior to the abortion. This has been also confirmed by other empirical studies in Vietnam that showed that the prevalence of RTIs has been quite high in Vietnam, particularly among rural women (Do and Stoeckel, 1993; Phan *et al.*, 1996).

Most abortion sites at the provincial and lower levels had inadequate emergency equipment and drugs in poor condition, a situation which differs from the assessment carried out by WHO (WHO, 1999, p. 38-39). This organization noted that "most abortions were performed in clean procedure rooms." However, at the district and lower levels, it was observed that procedure rooms failed to meet normal hygienic standards. Furthermore, most providers admitted that the health facilities, equipment and technical skills of the providers did not ensure safe induced abortions.

4.2.7. Managing the treatment of abortion complications

Providers reported that complications related to induced abortions rarely occurred. However, clients stated that if they experienced any complication, they would not return to the site of the original abortion procedure, and would seek treatment elsewhere. This may imply that the providers' estimates regarding the cases of complications are biased. It also suggests that post-abortion care is likely to be quantitatively and qualitatively insufficient and that primary health care services should play an important role in treating complications related to induced abortion.

4.3. Views of unmarried youth and adolescents on induced abortion

Despite the fact that there are many studies on abortions among adolescents or on abortions outside marriage, the rate of IA outside marriage is still unknown. Most members of the research team considered that the existing estimates of the level of induced abortions among unmarried youth, based on knowledge of Vietnamese culture and hospital records, is unreliable. The information for this population group in our study was drawn from group discussions among unmarried youth aged 15-22, in which two groups of males and two groups of females were interviewed by interviewers of the same sex as the members of the particular group being interviewed. In addition, the interviewers were highly skilled and had had a great deal of experience in dealing with issues that were of concern to young people. Consequently, the interviews and discussions in their groups went very smoothly.

4.3.1. Youth's knowledge of abortion and contraceptive methods

Most of the members of the discussion groups believed that an IA is harmful to their health. They also stated that they had heard messages about this on the radio and/or television. However, they could not describe any complications relating to induced abortion and only said, "Abortions weaken our health", etc. None of the respondents thought that a woman who had had an induced abortion would experience reduced fertility or have a higher risk of acquiring STDs, RTIs and AIDS.

Many studies on reproductive health find that youth have limited knowledge and practice of contraception, as well as of basic physiology and sexuality (Belanger and Khuat, 1996; Vu and Ngo, 1996; NCPFP, 1999b). In this survey, almost all members of the discussion group had heard about at least one method of contraception. However, they had difficulty describing how they should use the method of contraception they knew about. In particular, some boys said that the use of FP was mainly the female's rather than the male's responsibility in any relationship.

4.3.2. Accessibility to abortion and family planning services

Young people claimed that most health workers could recognize unmarried clients, but they did not ask about the clients' marital status. Girls were often reluctant to seek public services because they were afraid they would be denied. They therefore had to seek private services to terminate their pregnancies. They revealed that

> "unmarried clients realized that private services have poor medical equipment, but they preferred private services to public ones because of their confidentiality". Even a boy said: "if my partner got pregnant, I would look for health services far away from my house to avoid encountering anyone who might know us."

Although obtaining abortions from health services was very easy, unmarried people had to seek private services, or services far from their place of residence. They had to do this because of the social stigma associated with unmarried women becoming pregnant and having an induced abortion.

FP services were available for most couples and married women, but not for unmarried women in Vietnam. Young people obtained contraceptives themselves in pharmacies and the private sector. The most commonly used contraceptives were the condom and the pill. It is interesting that the interviewees expressed curiosity when the interviewer suggested other kinds of contraceptive methods not locally available. In particular, a number of questions were asked about the injection and emergency methods.

4.3.3. Public opinions and social ideas about induced abortion

Generally speaking, rural communities look down on children born outside wedlock. Unmarried mothers have much more difficulty getting married than widows or divorced women who wish to remarry. One local teacher in Cao Bang province said that

> "In the past, communities were prejudiced towards single mothers. Now, however, public opinion has altered a little bit. But unmarried women still have difficulty getting married and are likely to have to bring up their children alone."

Thus, even in this changing situation, it is not surprising that women who are likely to become single mothers if they do not have an induced abortion seek IA services.

There is more prejudice against female than male students. One female student claimed that the headmaster of her school became very angry when he found out that a female student had become pregnant. This student was expelled, while her partner was only blamed for the pregnancy yet allowed to remain at school. This gender inequity puts pressure on females and leads girls to seek clandestine IA services to terminate their pregnancies.

4.3.4. Sex education

Most members of the focus discussion group said that they were very shy during the first lesson on sex education at high school, but that they became more relaxed with the material covered in later lessons – material that they found to be very useful. However, they commented that the sex education provided in school did not contain enough essential information. They wished to be provided with more information on basic physiology, sexuality and contraception. Furthermore, IEC materials for young people were rarely available. Almost all the interviewed youth declared that they only saw the FP or HIV/AIDS messages on posters or advertising boards in the commune centers and streets. They had never seen any FP or HIV/AIDS leaflets.

As in other related research in Vietnam, peers were found to be an important source of information (whether accurate or inaccurate) on sex education issues. This was particularly so in the case of girls (NCPFP, 1999b; Vu and Ngo, 1996). The findings from this study suggest that this matter needs to be addressed more carefully by the FP Program.

4.3.5. Youth's views on the solution to reduce recourse to abortion

At the end of each discussion, the focus group leaders often asked the interviewees to offer recommendations that might help to reduce the need for young women to seek an induced abortion. Most groups stated that they had very little knowledge about contraceptive options and would have liked the National Family Planning Program to provide young people with appropriate services.

Furthermore, young people wished to be put in contact with their peers to exchange information on lifestyles. They suggested that a

youth club was a reliable place to help them meet other young people. However, providing FP information in this sort of club is not likely to be sustainable unless it is integrated into other activities such as art and sport. Some girls claimed that most FP coordinators in their communes were middle-aged and did not pay attention to youth. Consequently, young girls and boys often were reluctant to make contact with these people.

In fact it seems that the younger generation was less concerned than older people about induced abortion. They did not think that an IA broke social virtues or norms. They wanted their parents, as well as educators, their community and policy makers at all levels of the FP Program to understand their problems. Above all, they wanted to be provided with effective assistance so that young women could avoid having unwanted pregnancies.

5. Conclusions

The findings in many current studies on Vietnam show that the private health sector has probably increased in size since 1989 (World Bank, 2001). The number of private abortion health services, with or without official sanction, is unknown, but is believed to be growing rapidly in Vietnam's largest cities and towns, especially in the south. These services are provided to a large number of clients – particularly to unmarried youth and adolescents. Due to the uncertainty of the level of use of public health and private services for undergoing an IA, the records on the number of IAs are of doubtful accuracy.

Educational attainment and the type of occupation are two indicators that greatly influence the number of women seeking IA services. In particular, women working in administrative and industrial sectors had a higher abortion rate than those working in the agricultural and service sectors.

Generally speaking, women with high parity seek abortions to limit the size of their families. The number of living children in general, and sons in particular, is likely to affect women's decisions to terminate their unwanted pregnancies.

The number of abortion-related complications is extremely high. This reflects the prevalence of unsafe abortions in Vietnam, particularly for women in rural areas. Although post-abortion care is available

in public health services, many clients are reluctant to return to their original health service center for the treatment of complications. This suggests the low quality of public health care service in Vietnam. Moreover, primary health care is regarded as the best level at which to handle complication management.

IA services are available and accessible in the country – particularly menstrual regulation services, the fee for IA services being very low. Many women therefore use these services to terminate their unwanted pregnancies. Although abortion services are available everywhere, the standard of health care services is not sufficiently high. This is demonstrated by the fact that the majority of clients did not receive a medical examination to determine whether they were pregnant before undergoing an induced abortion.

Health and FP managers are aware that the technical skills of the providers of the IA procedure are inadequate, and several approaches are currently being used to train potential abortion providers in Vietnam. Nevertheless, abortions are performed by untrained practitioners in many clinics. Even regular IA services sometimes use untrained staff, particularly communal health centers.

The effectiveness of the FP Program, including the efforts of the IEC program and the provision of contraceptive services, is reflected in the high rate of contraceptive use in Vietnam. However, FP Program managers have to cope with high failure rates of contraceptive use. This problem requires managers to pay more attention not only to finding adequate modern contraceptive methods for Vietnamese women, but also to improving the skills of providers and those who offer women counseling services. Moreover, the FP IEC Program, as well as the FP services and network, focus exclusively on married couples and married women. Unmarried youths are ignored by the community-based distribution system. Although the FP Program has achieved considerable success, the provision of safe, appropriate contraception still constitutes a major challenge for the FP Program in Vietnam.

As a result of the changes in Vietnamese society – the knowledge, attitude and behavior of youth –, the number of induced abortions outside marriage is increasing (VCPFP and PRD, 2003, p. 28-29). However, the education system is not concerned with providing a comprehensive FP service for Vietnamese youth. Moreover, parents and educators hold more conservative views than youth. This dogmatic attitude sometimes results in female students seeking clandestine abortions.

6. Recommendations

Information provision

The IEC program needs to emphasize the health risks resulting from an induced abortion more widely in the community. The IEC program also needs to provide information as well as counseling on modern contraceptive methods for all targeted groups of reproductive age.

The IEC programs and counseling services on FP should be reformed to be relevant for all, particularly as regards the provision of contraceptive information for unmarried youth.

FP services

High contraceptive failure rates are resulting in unwanted pregnancies. It is therefore essential to evaluate the effectiveness of modern contraceptive methods as well as the contraception distribution system in the health and FP programs.

It is also necessary to establish national technical guidelines for various services in abortion procedures and in the treatment and management of abortion complications in order to improve the quality of care for IA services such as the provision of FP information and essential counseling for addressing the side effects of contraceptives.

FP services should be reformed and designed to meet the needs of unmarried and young people.

Training

In-service refresher training should be given to abortion service providers. These efforts should build on curricula currently being used by the reproductive health program, including technical skills, counseling, management of abortion complications and appropriate infection prevention practices.

The knowledge and skills of the providers should be improved and integrated into a broader focus on FP and other reproductive health issues. The capacity of providers should be increased to inform clients about contraceptive side effects and how to deal with side effects and complications appropriately, and to support women in selecting suitable modern methods.

Policy and law

Policy makers, planners and managers in FP and reproductive health care programs should take responsibility for policy reform and make plans for the provision of safe abortions and FP information, as well as for the management of abortion complications.

Laws and related legal issues concerning IA should be reviewed with respect to the limitation of IA accessibility.

IA service fees should be reviewed to set a relevant price in order to improve conditions for safe procedures, to reduce recourse to induced abortions, and to avoid abortion without pregnancy.

Pregnancy testing regulations should be defined in order to avoid unnecessary IA, and pregnancy testing services should be available at all IA health care sites.

The health record system must be reformed to provide accurate, relevant information for health and FP managers, policy makers and planners, especially with regard to private sector abortion and abortion in public facilities by "relatives" of expectant mothers.

Future research

A large household survey should be conducted to accurately estimate the level of IA rates. This information is needed to design strategies and policies for reducing the level of abortions in Vietnam.

The causes of contraceptive failure should be identified for both clients and providers and the contraceptive distribution system should be evaluated at all levels of FP services.

The consequences and causes of abortion complications should be studied to determine the responsibility of providers and to improve the quality of abortion care.

Also, a survey of all abortion services should be conducted to provide a better understanding of the present status of abortion.

The IEC approach to abortion and reproductive health issues should be innovative for young people and newly married couples. In particular, new intervention models should be tested for youth.

Finally, the findings from IA research should be used to help FP and health policy makers and managers to identify suitable approaches that should receive priority in order to reduce the IA rate in Vietnam.

References

ALLMAN, James, and VU Qui Nhan (1991), "Fertility and FP in Vietnam", *Studies in Family Planning*, vol. 22, no. 5, p. 308-317.

ARMSTRONG, Sue, and Erica ROYSTON (1989), "Deaths from abortion", in: WHO, *Preventing Maternal Deaths*, p. 107-134.

BELANGER, Daniel, and KHUAT Thu Hong (1996), *Research Results on Sexuality and Induced Abortion Pre-Marriage Among of Young Women in Hanoi*, Reports of Social Science Institute, Hanoi.

BONGAARTS, John (1990), "The measurement of wanted fertility", *Population and Development Review*, vol. 16, no. 3, p. 487-506.

DIXON-MUELLER, Ruth (1993), "Abortion policy and women's health in developing countries", *International Journal of Health Services*, vol. 20, no. 2, p. 297-314.

DO Trong Hieu and John STOECKEL (1993), "Pregnancy termination and contraceptive failure in Vietnam", *Asia-Pacific Population Journal,* vol. 8, no. 4, p. 3-18.

GOODKIND, Daniel (1994), "Abortion in Vietnam: Measurements, puzzles, and concerns", *Studies in Family Planning*, vol. 25, no. 1, p. 342-352.

GSO (1995), "Major finding", *Vietnam Inter-Censual Demographic Survey 1994*, Statistical Publishing House, Hanoi.

GSO (1997), "The proximate determinant of fertility: Vietnam 1994", *Vietnamese Inter-Censual Demographic Survey, 1994*, Statistical Publishing House, Hanoi.

HOANG Kim Dzung, NGUYEN Quoc Anh, TRAN Thi Phuong Mai *et al.* (2001), "Regressive study in proximate determinant of induced abortion in Vietnam", Research paper of NCPFP, funded by NCPFP and Ministry of Scientists, Industry and environment.

HOUGHTON, Jonathan (1997), "Falling fertility in Vietnam", *Population Studies*, vol. 51, p. 203-211.

http://www.agi-usa.org/sections/abortion.html.

JOHANSSON, A., *et al.* (1996), "Abortion in context: Women's experiences in two villages in Thai Binh province, Vietnam", *International Family Planning Perspectives*, vol. 22, no. 3, p. 103-107.

JONES, Gavin (1984), "Population policy in Vietnam", in: Jones Gavin, ed., *Demographic Transition in Asia*, Maruzen Asia.

JONES, Rachel K., Jacqueline E. DARROCH and Stanley K. HENSHAW (2002), "Patterns in the socioeconomic characteristics of women obtaining abortions in 2000-2001", *Perspectives on Sexual and Reproductive Health*, vol. 34, no. 5, p. 226-235.

MCCARTHY, James, and Deborah MAINE (1992), "A framework for analyzing the determinants of maternal mortality", *Studies in Family Planning*, vol. 23, no. 1, p. 23-33.

NCPFP (1989), *People's health law 1989*, Current Policies Related to Population and Family Planning Issues, Project VIE/93/P07, Center for Population, Labor and Society, Ministry of Labor and Social Affairs in Vietnam, Hanoi.

NCPFP (1990), *Vietnam Demographic and Health Survey 1988*, Statistical Publishing House, Hanoi.

NCPFP (1999a), *Demographic and Health Survey 1997*, Statistical Publishing House, Hanoi.

NCPFP (1999b), *Adolescent Reproductive Health – Survey and Assessment of Knowledge, Attitude and Practice on Related Reproductive Health of Adolescents in Hai Phong City*, Report of the Center for Population Studies and Information and FP International Association (America), 1998.

NCPFP (2000), *Demographic and Health Survey 1997. In-depth Analysis for Population and Family Health Baseline Values*, Statistical Publishing House, Hanoi.

NCPFP and GSO, (1995), *Analysis Reports of the Survey Results on Population and Family Planning, March 1995*, Statistics Publication House, Hanoi.

NGUYEN Quoc Anh and HOANG Kim Dzung (2000), "Induced abortion in Vietnam: Context, determinants, and resolutions", Monograph no. 5, VNDHS 1997, funded by the National Committee for Population Studies and Family Planning and the World Bank, Publishing House of the General Statistics Office, Statistical Publishing House in Vietnam.

PHAN Thuc Anh and TRUONG Viet Dzung (1996), *Abortion, Menstrual Regulation and Unwanted Pregnancies*, Statistical Publishing House in Vietnam.

PHAN Thi Kim Anh *et al.* (1996), "Prevalence of lower genital tract infection among Vietnamese women attending a Maternal and Child Health Center in Hanoi, Vietnam", *Southeast Asia Journal of Tropical Medicine and Public Health*, vol. 27, no. 1, p. 193-195.

THE ALAN GUTTMACHER INSTITUTE (1999), "Sharing responsibility – Women, society and abortion worldwide", Special report downloads from website of The Alan Guttmacher Institute.

TIETZE, Christopher (1982), "Induced abortion", *International Encyclopaedia of Population*, John A. Ross, ed., The Free Press.

TIETZE, Christopher (1983), *Induced Abortion: A World Review*, 5th ed., The Population Council, New York.

TRINH Hong Thuan (1997), *Preventing Sexual Abuse in Teenage*, Report presented at the Conference on Adolescent Reproductive Health, Hanoi, January 28-29.

UNFPA (1990), *Vietnam. Program Review and Strategy Development Report*, UNFPA, Hanoi.

UNITED NATIONS (1995), *Abortion Policy: A Global Review. Vol. III: Oman to Zimbabwe*, Department for Economic and Social Information and Policy Analysis, New York.

VCPFP and PRD (2003), *Adolescent and Youth in Vietnam*, Committee for Population, Family and Children in Vietnam and Population Reference Bureau (USA), Vietnam General Company of Book Distribution.

VIETNAMESE MINISTRY OF HEALTH (2001), *Health Statistical Yearbook, from 1996 to 2000*, Health Statistic and Information Division, Ministry of Health, Hanoi.

VU Qui Nhan and NGO Dang Minh Hang (1996), *Reproductive Behavior of Unmarried Urban Students of Age 17-24 in Vietnam*, Report by the Center for Population Studies and Information/National Committee for Population and Family Planning.

WHO (1995), *Complications of Abortion. Technical Managerial Guidelines for Prevention and Treatment*, World Health Organization, Geneva.

WHO (1999), "Abortion policy in Vietnam: An assessment of policy and program and research", in: *Expanding Option in Reproductive Health*, WHO, UNDP, UNFPA, World Bank Special Program of Research Development and Research Training in Human Reproduction, World Health Organization, Geneva.

WORLD BANK (1992), *Vietnam. Population, Nutrition, and Health*, World Bank, Division of Policy, Washington DC, Report no. 10289-VN.

WORLD BANK (2001), *Health and Sustainable Development – Profile of Health System in Vietnam*, Document of World Bank, SIDA, AUSAID (Australia), Embassy of the Netherlands, and Ministry of Health in Vietnam, Information and Development Center of World Bank Office in Vietnam.

11

VARIATIONS IN THE UTILIZATION OF REPRODUCTIVE HEALTH SERVICES AND ITS DETERMINANTS: AN EMPIRICAL STUDY IN INDIA

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1. Introduction

Reproductive health is defined as a "state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes" (United Nations, 1994). Reproductive health therefore is multidimensional and associated with various life-cycle events of women such as menarche, marriage, pregnancy, childbirth and menopause (Jayasree and Jayalakshmi, 2001). The main socioeconomic factors that influence reproductive health are poverty, lack of purchasing power, illiteracy, and malnutrition. They all contribute to the 'poor matrix' of the mother who is to produce the future generation. Other factors that have a bearing on reproductive health are early age of marriage, large family size, high parity, short inter-pregnancy interval, the burden of supporting family economy, ignorance and prejudices, social customs, non-availability of skilled health services at times of need, poor referral services and communication systems (Venkateswara Rao, 2001).

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Reproductive and child health (RCH) interventions are expected to provide quality services and achieve multiple objectives. There has been a positive paradigm shift from method-mix target-based activity to client-centred demand-driven quality services. The Government of India re-oriented the programme and strengthened the services at the outreach level. The new approach requires decentralization of planning, monitoring and evaluation of the services at the basic nucleus level, which is the district.

The Government of India (2001) launched the RCH programme for implementation by integrating the Child Survival and Safe Motherhood (CSSM) Programme with other RCH services in 1997-98. In addition, a new component for management of reproductive tract infections (RTIs) and sexually transmitted infections (STIs) has also been incorporated.

2. Health care system in India

The heath care system in India is operationalized on a three-tier system – centre, state and district. The responsibility of the centre consists mainly in policy making, planning, guiding, assisting, evaluating and coordinating the work of the state health ministries. The responsibility for implementing the policies, however, rests with the state governments, which are required by the constitution to provide medical and health care for people living in their jurisdictions. Actual implementation takes place at the district level, the district being the principal unit of administration in India. The office of the district medical and health officer serves as the nerve centre for integrating all state-financed health activities in the rural areas. In urban areas, municipal health departments are mainly responsible for providing preventive and curative health services.

A district is normally covered by 8 to 12 primary health centres (PHCs). The medical officer in charge of a primary health centre has the overall responsibility for providing integrated health services, namely curative, preventive and promotive, to the population. Each primary health centre has subcentres, which cater to a population of about 5,000. Each subcentre is manned by male and female multipurpose health workers. They provide an integrated package of services: medical care, maternal and child health care, family planning, control

of malaria and other communicable diseases, environmental sanitation, collection of vital statistics and health education.

India's health system thus rests on a well-conceived infrastructure to make health care available to rural areas, with multipurpose health workers engaged at the base, the subcentre's staff at the base next going up to the main primary health centres and their qualified personnel and, finally, the government hospitals at the apex of the edifice.

3. Population coverage

At the all-India level, 35% of the women did not receive any antenatal care (ANC). Of the ANC services, 75% of the women had received at least one TT injection, but less than 50% received IFA tablets or had an abdominal check-up, and blood pressure and weight were recorded for hardly one third of the women. Over one third of the women had complications during pregnancy. While almost all women have knowledge of contraceptive methods, the level of its adoption accounts for only half of them (RCH Project, 2000).

In the states of Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan, the utilization of government health facilities for delivery was poor (5-16%), whereas home deliveries were widely prevalent, exceeding 75%, and were largely attended by untrained birth attendants (80-92%), consequently with a greater probability of high risk of maternal morbidity and mortality. Post-delivery visits by female health workers were also the least in these states, where they were below 5%. No immunization was reported for every second child in Bihar, every third child in Rajasthan and every fourth child in Uttar Pradesh. Given the poor performance in the field of maternal and child health care and also family planning in these states, it is no wonder that they had a shortfall of 13-28% of PHCs and 14-24% of subcentres. Further, over one fifth of the existing PHCs in Uttar Pradesh and Madhya Pradesh were functioning without a single medical officer. When the medical and health facilities in government establishments are so poor in these states, it is quite natural for the rural folk to prefer home delivery and to seek the services of an untrained birth attendant.

4. Factors influencing the utilization of health facilities

The paradox is that, in spite of the availability of health facilities, their utilization is very meagre. The problem is more acute in the remote areas, where, whatever meagre facilities have been made available, they are not optimally utilized by the people. Instead, people go to practitioners of indigenous methods, who are not formally qualified, such as traditional birth attendants, faith healers and other private practitioners who live and work among them.

Several studies have been conducted on the utilization of existing health care services in India (Griffith, 1963; Dutt *et al.*, 1975; Chuttani *et al.*, 1976; Johns Hopkins University, 1976; Kakar, 1977; Ramachandran, 1977; Sharma *et al.*, 1978; Qureshi and Karbanda, 1980; Avasthi, 1980; Srikantan and Samuel, 1981; Seal, 1981; Jagadish, 1981; Kothari *et al.*, 1982; Siva Raju, 1987; Yesudian, 1988). A majority of these studies have revealed the very poor image that government health centres have among the people. Some of these studies have indicated that only 10 to 20% of the villagers utilize the government health services. Among the small proportion of villagers who used the facilities, a majority are dissatisfied with the services, mainly because of the non-availability of medicines and the impersonal behaviour of the health functionaries.

According to Sharma *et al.* (1978), the average time devoted to each patient by the medical officer at a government hospital was only 117.15 seconds. The medical officers, however, felt that they should spend at least 6.83 minutes for a patient. According to the authors, they are probably not able to do so because of long queues at the dispensaries during peak hours. Qureshi and Karbanda (1980), through observation of the activities of the medical officers in selected dispensaries during working hours, concluded that medical officers performed mainly two activities: history taking and prescription writing. With respect to the interaction between the district hospitals and primary health centres, Jagadish (1981) observed that doctors at the centres do not have opportunities to discuss with fellow professionals and specialists the clinical problems peculiar to their area. There is no well organized referral system. Apart from professional dissatisfaction, doctors complain about the facilities available in the rural areas, about the lack of proper accommodation, inadequate schooling for their children and unsatisfactory social life.

Similarly, Kothari *et al.* (1982) observed that the unsatisfactory behaviour of the staff at the health centres, the long distance, the non-availability of drugs and the lack of faith in the doctor's treatment are some of the major factors responsible for the poor utilization of government hospital services. Siva Raju (1987), in his study on hospital utilization in Andhra Pradesh, observed that the acceptability with respect to cleanliness and orderliness of the clinic, the time spent by the doctor to examine the client, the time spent by the client for waiting to see the doctor, privacy provided at the clinic, rest facilities and facilities offered to accompanying person(s) were satisfactory for only less than half of the population. Yesudian (1988) pointed out the various factors responsible for the poor health status in metropolitan cities, despite large amounts of resources being expended on health services. He concluded that so long as proper planning, organization and distribution of services did not receive the attention of the authorities, there was no scope for any improvement in the situation.

A glance at health and family welfare programme statistics in India shows that there exist wide variations in family planning programme performance in different states and in different regions in each state. This variation in performance is also observed in different districts in the respective regions. Goyal (1987), from his analysis of different states, concludes: "Some states with lower per capita expenditure on family welfare have achieved better coverage of population and consequently have shown better performance". Wide variations in the performance of the reproductive health programme, as observed in different regions, may be due to the differential levels of development of the regions with respect to various socioeconomic, demographic, cultural, ecological, health and other developmental factors.

Pisharoti (1971) found that neither socioeconomic variables nor administrative resources variables individually account for major differentials of family planning performance in the different states of India. Their combined effect has been found statistically significant at the state level. Mishra (1973) notes that

> "the variations among different states in India regarding performance of family planning can be the result of: (a) the administrative and organizational machinery which can deliver the goods, (b) a composition of different client population, and (c) a combination of these two factors".

Further, he found that performance of family planning is significantly correlated with variables, like percentage of literacy, per capita income, per capita electricity consumption, medical and paramedical personnel, expenditure on family planning, with the index of development. A state-wise analysis undertaken by the World Bank to study the relationship among programme inputs, socioeconomic levels and family planning performance in 15 states of India showed that the birth rate had significant correlation with death rate, urbanization, surfaced roads, and female secondary school enrolment. Yadav and Shah (1977), in their study on two sets of districts in Karnataka State, which showed extreme performance of family planning, inferred that demographic variables like percentage of urban population, density of population, sex ratio and literacy rate, socioeconomic and other developmental variables, like educational development, communication and recreational development, mechanization of agriculture, banking development, electrification, agricultural development, and programme input variables, like medical and family planning service centres, staff position at the PHC level and staff position at the district level, have all shown close association with family planning acceptance rates. It is also observed that in the high-performance districts, all the developmental variables mentioned above are uniformly important when compared with low-performance districts. Srikantan (1977), from his study of 15 states of India to determine the extent to which the family planning programme output depends on the inputs and the infrastructure, inferred that although literacy, especially for females, is an important infrastructural indicator and facilitates programme implementation, female participation in the labour force has a direct effect on programme outputs. Malgavkar and Pai Panandiker (1982), from their study, inferred that

> "…the principal task should be to interlink and integrate immediately the delivery system in the specific socioeconomic sectors with the FPP so that we can have better success in containing population growth and, simultaneously, in improving the quality of life of the Indian people."

Siva Raju (1987), from his study on regional differences in Andhra Pradesh, observed:

> "People in the Rayalseema and Telangana regions are characterized by low socioeconomic status, high fertility level, more religious outlook, less modernity and low level of family planning adoption. On

> the other hand, the people in coastal Andhra have relatively better socioeconomic status, less religiosity, more modernity, lower fertility level and higher level of family planning adoption".

From the review of these studies, it is very clear that there is a significant association between the level of development and the family planning performance among different states and regions of India. Therefore, the study of spatial distribution and growth of population resulting from geographic, historical, economic, social and cultural factors is very important in understanding the population problem of a region.

Despite the creation of a network of health care institutions, the utilization of health services is limited, mainly because nearly three fourths of the population prefer to take a quick recourse to the age-old habit of going to indigenous medical practitioners. A majority of the population, especially in rural areas, prefer indigenous medicine, mostly due to its advantages like cultural acceptability, low cost, and easy access to the healer. Although they constitute a larger reserve of health manpower, their activities very seldom receive the attention of health officials. Emphasizing their importance, the report of the Alma Ata Conference observes, "With the support of the formal health system, these indigenous practitioners can become important allies in organizing efforts to improve the health of the community" (World Health Organization, 1978).

Several studies have focused on various types of private practitioners and interrelationships between traditional and modern systems of medicine (Alexander and Sivasamy, 1971; Pradhan, 1973; Bhatia *et al.*, 1976; Kocher *et al.*, 1976; Neumann *et al.*, 1976; Kakar, 1977; Shukla *et al.*, 1980; Gambhir and Udupa, 1981; Ramesh and Hyma, 1981; Sathyavathy, 1982).

It has been estimated that in India, traditional birth attendants deliver 50 to 60% of the babies born (Bhatia, 1985). The traditional birth attendants lack knowledge regarding aseptic techniques of delivery and thus contribute to high infant and maternal mortality. To equip them to handle their jobs in a systematic and scientific manner, the Indian government has initiated training programmes and plans to train thousands of them, so as to have at least one trained traditional birth attendant in each village. The studies conducted on indigenous practitioners have therefore clearly indicated their significant role in improving the health status of the people, especially in rural areas.

5. Methodology

In India, for women in reproductive age and those who live in rural areas, getting proper medical aid was found to be beyond their reach, which is mainly due to their poverty, illiteracy, general backwardness and adherence to superstitious beliefs concerning illnesses and diseases. With a view to understanding the variations in the utilization of reproductive health (RH) services and its determinants, an empirical study was carried out in three contrasting states (Andhra Pradesh, Madhya Pradesh and Maharashtra) of India. Wide variations in the performance of the reproductive health programme are noticed across these states (Table 1).

Table 1
Performance in reproductive health programme in selected states and India

	Maha-rashtra	Andhra Pradesh	Madhya Pradesh	India
Mothers receiving at least one antenatal check-up	90.4	92.7	61.0	65.4
Deliveries in medical institutions	52.6	49.8	20.1	33.6
Children aged 12-23 months who have received all vaccinations	78.4	58.7	22.4	42.0
Per cent of women/husbands who ever used any method of contraception	61.7	57.3	49.6	51.3

Source: National Family Health Survey (NFHS-2), 1998-1999

Andhra Pradesh is the fifth largest state in India in terms of geography and population. Area-wise, the state has 275,068 sq. km. Its population crossed 75 million in March 2001. The density of population is 275 persons per sq. km to date, which is significantly less than the national density of 324 persons. The majority of the population are Hindus (59 millions). Andhra Pradesh has a substantial population of scheduled castes who constitute 6.3% of total population. In literacy, scheduled tribes are backward, with a meagre 17.0% literate, while scheduled castes are somewhat better-off, with 32.0% literate. The urban population of the state in 2001 was 27.08% of the total popula-

tion, as compared with 26.89% in the 1991 census. Andhra Pradesh's urban population was only marginally higher than the national level (25.7%) during the previous census period. Andhra Pradesh occupies the fifth position in the country, constituting of 8.20% of the urban population.

Maharashtra has a land area of 307,713 sq. km, which is about one tenth of the total land area of the country. According to the 2001 census of India, the total population of the state was 96.8 million, which is 9.4% of the total population of India. In terms of population size, it is the second largest state in India next to Uttar Pradesh. The population density of Maharashtra increased from 257 persons per sq. km in 1991 to 314 persons per sq. km in 2001. 11% of Maharashtra's population belong to scheduled castes and 9% belong to scheduled tribes. Maharashtra is one of the most urbanized states in India (42.0% urban).

Madhya Pradesh is located at the geographic centre of India. Spread over 443 thousand sq. km, it is the largest Indian state in terms of area and accounts for 14% of India's land mass and 8% of India's population. The state has the highest proportion (23.0%) of scheduled tribes' population in the country outside of the northeastern states. Variations in the levels of development and performance in reproductive health programmes were noted in different districts in the state.

The sample survey approach was adopted in conducting the study. As the main focus of the study is to assess the existing patterns of the health care system, with a special focus on reproductive health (RH) provided by both government and non-government health agencies, it was felt necessary to select the areas for the study in such a way that all the government health programmes were implemented in those areas. To cover the study area from all the geographic regions of the country, Nashik district in Maharashtra (western part of India), Shivpuri district in Madhya Pradesh (northern part), and Chittoor district in Andhra Pradesh (southern part) were chosen at random (Table 2). From each of the three selected districts, two primary health centres, one developed centre (over 75% achievement in the RCH programme) and another one with low performance (below 75% of achievement) were selected. In each of the selected primary health centres, all the villages were listed, ten of which were selected at random. In the selected villages, altogether 1,087 currently married couples (less developed PHCs: 514; more developed PHCs: 573) having at least one child below 5 years of age were selected at random for the study. From each of the

selected households, couples were considered as the respondents and they were contacted for data collection. An interview schedule was administered to these couples and necessary information was obtained from them.

Table 2
Profile of selected districts

Characteristics	Nashik	Chittoor	Shivpuri
Population (in millions)	3.9 (79)	3.3 (67)	1.1 (66)
Density of population (per sq. km)	248 (257)	215 (242)	110 (149)
Sex ratio (no. of females/1000 males)	940 (934)	966 (972)	849 (931)
Literacy rate (in percentage):			
Persons	62.33 (64.87)	49.75 (44.08)	33.03 (44.20)
Males	73.98 (76.56)	62.61 (55.12)	47.50 (58.42)
Females	49.89 (52.32)	36.44 (32.72)	15.64 (28.85)
Percentage of urban population to total population	35.55 (38.69)	19.80 (26.89)	15.19 (23.18)

Figures in parentheses refer to states.
Sources: for Nashik: India, Registrar General of India (1991), *District Census Handbook-Nashik*; for Chittoor: India, Registrar General of India (1991), *District Census Handbook-Chittoor*; for Shivpuri: Data collected by various offices of the district of Shivpuri.

6. Findings

6.1. Background of respondents

The socioeconomic and demographic backgrounds of the women are presented in terms of their educational status, occupational status and number of conceptions they had. The majority of the total sampled women are illiterate, without much variation across less and more developed areas. Over three fourths of them in both areas are housewives. 17.9% of them in less developed areas and 16.6% in the more developed areas are daily wage earners. Women in more developed areas have relatively lower fertility levels than those in the less developed areas. For instance, while nearly two thirds (60.2%) of the women in more developed areas had 1 or 2 conceptions only, they constitute nearly half of the sample (48.8%) in the less developed areas. The

mean number of conceptions among the total sampled women works out to be 2.5, with variations across the areas (less developed areas: 2.6 and more developed areas: 2.3) (Table 3).

Table 3
Socioeconomic and demographic background of respondents

Socioeconomic and demographic background	LDA (N=514)	MDA (N=573)	Total (N=1,087)
(i) Educational status			
Illiterate	50.8	64.2	57.9
Primary	13.6	9.7	10.5
Secondary	31.1	25.3	28.1
Collegiate	4.5	2.8	3.6
(ii) Occupational status			
Housewives	73.3	79.4	76.5
Daily wage earners	17.9	16.6	17.2
Others	8.8	4.0	6.3
(iii) Number of conceptions			
1	30.9	40.8	36.2
2	17.9	19.4	18.7
3	23.9	17.1	20.3
4	14.4	11.2	12.7
5	12.8	11.5	12.1
Mean	2.6	2.3	2.5

LDA = Less Developed Area; MDA = More Developed Area.

6.2. Antenatal care

Different antenatal aspects are covered in the study, such as visits by health workers, from which month of pregnancy onwards, total number of visits, proportion of women who received any service from the workers, periodical medical check-ups, and Tetanus Toxoid taken. Over two thirds (67.9%) of the women in the more developed areas, as against 53.9% of them in less developed areas, stated that the health worker of their area had visited them during their pregnancy. These visits are largely found during 4-6 months of pregnancy. The total number of visits made by the health workers is larger (mean: 2.3) in the more developed areas than in the less developed areas (mean: 1.7) (Ta-

ble 4). The proportion of women who received IFA tablets from the

Table 4
Utilization of antenatal care services

Antenatal care services	LDA (N=514)	MDA (N=573)	Total (N=1,087)
(i) Did any health worker visit your house			
NA	43.4	29.0	35.8
No	2.7	3.1	2.9
Yes	53.9	67.9	61.3
(ii) From which month onwards			
NA	46.1	32.1	38.0
1-3	15.4	15.7	16.3
4-6	30.3	39.5	35.1
7+	7.2	9.4	8.4
When pregnancy known	1.0	3.3	2.2
Mean	*6.4*	*6.0*	*6.4*
(iii) Average number of visits up to the time of delivery	1.7	2.3	2.5
(iv) Proportion of women who received iron and folic tablets	46.9	65.3	56.5
(v) Consulted for periodical medical check-up			
NA	45.7	30.5	37.7
No	9.3	23.9	17.0
Yes	44.9	45.5	45.3
(vi) From which month onwards (mean)	4.7	3.7	4.1

LDA = Less Developed Area; MDA = More Developed Area.

field health staff is also much higher (65.3%) among the women in the more developed areas than in the less developed areas. Similarly, consultations made for periodical medical check-ups also revealed wide differences among the women belonging to the two contrasting areas under study.

6.3. Natal care

Home deliveries are widely reported by women in the study, without much variation across the areas. The findings clearly reveal the importance of traditional birth attendants, especially during delivery. It

is significant to note that a quarter (25.9%) of the women belonging to less developed areas developed pregnancy complications during delivery, which clearly indicates the traditional delivery practices adopted in the community. Their corresponding proportion among the women of more developed areas was to the extent of 21.5%. Over one fifth of them (21.6%) in the less developed areas have consulted field health workers regarding their pregnancy complications (Table 5).

Table 5
Utilization of natal care services

Natal care services	LDA (N=514)	MDA (N=573)	Total (N=1,087)
(i) Place of delivery			
Home	81.5	89.0	85.5
Hospital	18.5	11.0	14.5
(ii) Any pregnancy complications			
No	74.1	78.5	76.4
Yes	25.9	21.5	23.6
(iii) Consulted for pregnancy complications			
No/NA	78.5	80.3	79.4
Yes	21.6	19.7	20.6

LDA = Less Developed Area; MDA = More Developed Area.

6.4. Postnatal care

Nearly one third of the sampled women, among both the less and more developed areas, stated that they consulted health personnel within one month after delivery. Further, it is observed that childcare was relatively better provided in more developed regions by the health personnel as compared with the care provided in the less developed areas. For instance, while nearly half (45.5%) of the women in more developed areas received Vitamin A solution for their newborn child, they constituted only 29.6% in less developed areas. Similarly, in the case of vaccination of their newborn child, it is noticed that while two thirds of the women from the more developed areas (64.6%) had their

children vaccinated, their corresponding proportion in the less developed areas is only 52.9% (Table 6). Thus, it is observed that the facility for postnatal care is at a relatively higher level in the more developed regions as compared with the less developed areas.

Table 6
Postnatal care services

Postnatal care services	LDA (N=514)	MDA (N=573)	Total (N=1,087)
(i) Within one month after delivery, consulted any health personnel			
NA	46.9	32.3	39.2
Did not consult	21.6	36.1	29.3
Consulted	31.5	31.6	31.6
(ii) Vitamin A solution for newborn child			
Not received	70.4	54.4	62.0
Received	29.6	45.5	38.0
(iii) Vaccination to newborn child			
Not vaccinated	47.1	35.4	40.9
Vaccinated	52.9	64.6	59.1

LDA = Less Developed Area; MDA = More Developed Area.

6.5. Family planning: knowledge, attitude and practice

For a country like India, adoption of the small family size norm is very essential and the family planning programme initiated by the Government of India as early as 1952 plays a vital role in this regard. There exist wide differences in the levels of knowledge, attitudes and practice of contraception in the community and much variation is found across various regions in the country. The present study also concurs with the earlier studies in the case of level of knowledge of the family planning programme (Table 7). Except for 4% of the respondents, almost all of them have heard of the family planning programme. With regard to their attitude towards the programme, an overwhelming proportion of them (81.8%), without much variation across the less and more developed areas, appreciated the programme. However, the actual level of practice among them is reported to sig-

nificantly differ between the two contrasting areas. For instance, while the proportion of those who have ever used any method of family planning is reported to be 54.3% in the more developed areas, their proportion has come down to 25.5% in the less developed areas. Such wide variations across the areas clearly reflect the existing variations in the infrastructural health facilities, level of development and other factors, besides the socioeconomic, demographic, health and cultural background of the community members.

Table 7
Family planning: awareness, attitude and practice

Family planning programme performance	LDA (N=514)	MDA (N=573)	Total (N=1,087)
(i) Awareness about family planning			
Not aware	4.7	3.7	4.1
Aware	95.3	96.3	95.9
(ii) Feeling about those who adopted contraception			
Depreciate	1.9	1.0	1.5
Appreciate	82.3	81.3	81.8
Uncertain	15.8	17.6	16.7
(iii) Ever used any method of family planning			
No	74.5	45.7	59.3
Yes	25.5	54.3	40.7

LDA = Less Developed Area; MDA = More Developed Area.

6.6. Utilization of health services

The utilization of health services plays an important role in improving the population coverage of the reproductive health programme. In this regard, the type of health centre the community members are visiting during their ill health and the level of satisfaction about health service facilities are some of the major issues which help in assessing the acceptability of various health services. The utilization of various health centres like government hospitals, primary health centres and subcentres located in the area is more important for the women from the more developed areas (30.4%), as against only 7.4%

in the less developed areas. In contrast, the utilization of only primary health centres is mostly preferred (53.1%) by the women from the less developed areas, as compared with 21.6% in the more developed areas (Table 8). The utilization of the subcentre, which is a local-level health unit, is significantly higher among those from the more developed areas (37.3%), which reveals the acceptability and accessibility of the local-level subcentre in these areas, as compared with only 16.9% in the less developed areas.

Table 8
Health service acceptability

Health service acceptability	LDA (N=514)	MDA (N=573)	Total (N=1,087)
(i) Type of health centre visited			
Not applicable	13.8	3.0	8.1
Subcentre	16.9	37.3	27.7
PHC	53.1	21.6	36.5
Govt. hospital/dispensary/private doctor	8.8	7.7	8.2
Subcentre and PHC/govt. hospital	7.4	30.4	19.5
(ii) Feeling about health service facilities			
Not satisfied	25.5	4.2	14.3
Partly satisfied	37.2	9.4	22.5
Fully satisfied	37.4	86.4	63.2
(iii) Proportion of PHC users not satisfied with:			
Location of the clinic	11.1	24.6	18.2
Cleanliness and orderliness of the clinic	17.9	21.3	19.7
Comfortableness of waiting room	22.0	26.0	24.1
Waiting time before seeing the doctor	30.9	21.5	25.9
Time spent by the doctor with the patient	21.0	24.8	23.0
Facilities existing around the clinic, like shopping centres, medical shops, hotels...	14.4	23.7	19.3
Satisfaction with referral facilities	14.2	30.0	22.5

LDA = Less Developed Area; MDA = More Developed Area.

The data on the level of satisfaction with the utilization of health service facilities indicate that an overwhelming proportion (86.4%) of the women from the more developed areas, as compared with one

third (37.4%) of those from the less developed areas, are fully satisfied with the existing health services.

An attempt is also made in the study to assess the health service acceptability of the respondents in terms of various facilities, viz. location of the clinic, cleanliness and orderliness of the clinic, comfortableness of waiting room, waiting time before seeing the doctor, time spent by the doctor with the patient, facilities existing around the clinic, and satisfaction with referral facilities. The data on all the indicators of service acceptability show that the respondents' level of satisfaction with respect to these indicators is relatively higher in the less developed areas when compared with their counterparts in the more developed areas. The findings indicate that in view of the higher level of utilization of these facilities and also of the availability of alternative health systems, such as private hospitals and other health centres, the respondents belonging to the more developed areas reported a lower level of satisfaction with the facilities available at the government health centres. On the contrary, in the absence of other alternative health systems and also of utilizing the locally available indigenous systems, women from the less developed areas expressed their greater satisfaction with the facilities available at the government health centres. The dissatisfaction of the clients would incline them not to attach importance to the advice of the health personnel working at these government health centres. Therefore, to increase the credibility of the service personnel and also to increase the influence of these persons among the clients for motivating them to accept and utilize various reproductive health programmes, better amenities may have to be urgently provided at these centres.

7. Conclusions and recommendations

In a vast country like India, with very wide disparities in various sectors of development among different states, uniform strategies for the country as a whole will not yield the desired results. As the reproductive health programme is a source of strength to all other schemes of socioeconomic development, effective measures have to be initiated to improve its performance in all states. Therefore, it is necessary to formulate policies and programmes that are based on realistic estimates and parameters and that are more meaningful in a decentralized man-

ner in order to effectively promote the programme in all regions. Identification of regions and broad cultural groups within each region on the basis of their performance in the health programme has to be initiated. It would provide clues to the health personnel to channel their effects on a realistic and differential basis among the regions and cultural groups, wherever performance of health programme varies.

In conclusion, it is observed that the number and types of variables and their extent of influence on reproductive health programmes vary significantly across different cultural and regional groups. Further, there are certain common specific factors that influence the reproductive health status of the people belonging to different cultures and regions. Hence, these findings raise a number of issues for formulating policies in the field of reproductive health, not uniformly for the country as a whole, but differentially for subregions in various parts of the country. Similarly, the pattern of various inputs for developing the reproductive health programme may also have to be suitably modified in view of the diversity of the factors and their influence on health care programmes across different cultures and ecological regions. Thus, the findings are unique in many aspects and should have far-reaching, theoretical, methodological, policy and programme implications in the reproductive health care programmes. Some of the most important implications of the present study are given below:

1. The findings of this research would suggest the need for a change in methodology for studies on reproductive health programmes. As differences exist in the performance in health programmes in different regions and cultural groups, it is essential to study the various determinants by stratifying the population according to regions, communities and other stratification variables. This would be a methodological achievement for improving explanatory efforts to understand better the determinants of the reproductive health status of women among different regions and groups.
2. Identification of areas and broad cultural groups within each area, on the basis of their performance in RCH programmes, would provide clues to the health personnel to channel their efforts on a realistic and differential basis among the regions and cultural groups, wherever performance in various health programmes varies.
3. Lack of proper infrastructural health facilities in the less developed areas rightly indicates the urgency of increasing infrastructural and health services and the doctor-patient ratio in these areas. Hence

differential financial and other inputs may have to be provided for different areas on the basis of their requirements and the existing performance in various health programmes in general, and reproductive health programmes in particular.

References

ALEXANDER, C. A., and M. K. SIVASAMY (1971), "Traditional healers in a region of Mysore", *Social Science and Medicine*, vol. 5, no. 6, p. 595-601.

AVASTHI, N. N. (1980), "Assessment of hospital services and patients' reaction", *Health and Population*, vol. 3, no. 4, p. 293-298.

BHATIA, J. C. (1985), "Impact of training on the performance of traditional birth attendants: A study in Maharashtra State", *The Journal of Family Welfare*, vol. 32, no. 3, p. 50-61.

BHATIA, J. C., *et al.* (1976), "Indigenous medical practitioners and their attitudes towards the proposed rural health scheme", *HIHAE Bulletin*, New Delhi.

CHUTTANI, C. S., *et al.* (1976), "Factors responsible for under utilization of primary health centres. A community survey in three States of India", *NIHAE Bulletin*, vol. 9, no. 3, p. 229-237.

DUTT, P. R., *et al.* (1975), "Report on the study of functioning of district FP and maternity and child health officers in four States of India", *Bulletin of GIRH & FP*, vol. 9, no. 3, p. 15-53.

GAMBHIR, I. S., and K. N. UDUPA (1981), *Indigenous Systems of Medicine in Primary Health Care*, Integrated Development Programme, Institute of Medical Sciences, Banaras Hindu University, Varanasi Appropriate Technology, Indian Council of Medical Research, New Delhi.

GOVERNMENT OF INDIA (2001), *Family Welfare Programme in India: Year Book*, Department of Family Welfare, Ministry of Health and Family Welfare, New Delhi.

GOYAL, R. S. (1987), "Family planning programme: Role of services", *Demography India*, vol. 16, no. 1, p. 23-32.

GRIFFITH, D. H. S. (1963), *Final Report on Public Health Programmes*, SEA/PHA/30, Andhra Pradesh, WHO Project.

JAGDISH, G. (1981), *Primary Health Care in Rural India*, World Health Forum.

JAYASREE, R., and Y. V. JAYALAKSHMI (2001), "Reproductive health status of rural women in Andhra Pradesh: An empirical analysis", in: *Health Strategies and Population Regulation*,vol. 1.

JOHNS HOPKINS UNIVERSITY (1976), *Functional Analysis of Health Needs and Services*, New York, Asia Publishing House.

KAKAR, D. N. (1977), "Folk and modern medicine (A north Indian case study)", *Journal of Family Welfare* (Naisarak, New Delhi), p. 168 and p. 173-175.

KOCHER, V., *et al.* (1976), "Strengthening the folk health system: Proposed link between the health needs of the rural population and limitations of the formal health systems in remote rural areas", *I.C.M.R.* 201-17.

KOTHARI, *et al.* (1982), "Health services utilization in rural area", *Indian Paediatrics*, vol. 19, no. 4, p. 303-314.

MALGAVKAR, P. D., and V. A. PAI PANANDIKER (1982), *Population and Development*, Bombay, Somaiya Publications.

MISHRA, B. D. (1973), "The Indian family planning programme and differential family planning performance of Indian States", *The Journal of Family Welfare*, vol. 20, no. 1, p. 26-46.

NATIONAL FAMILY HEALTH SURVEY (NFHS-2) (1998-1999), *India, Key Findings*, International Institute for Population Sciences.

NEUMANN, A. K., *et al.* (1976), "Role of the indigenous medicine practitioner in two areas in India: Report of a study", *Social Science and Medicine*, vol. 5, no. 2, p. 137-149.

PISHAROTI, K. A. (1971), *Factors Influencing Family Planning Programme Performance in India*, Doctoral thesis, University of North Carolina, Chapel Hill.

PRADHAN, P. N. (1973), "Scheme to utilize services of unqualified and qualified indigenous physicians practising in rural areas", *First Asian Congress of Rural Medicine. Usuda, Japan*, p. 24-27.

QURESHI, M. A., and V. P. KARBANDA (1980), "A comparative study of health delivery system of India and China", *Health and Population*, vol. 3, no. 3, p. 187-293.

RAMACHANDRAN, L. (1977), "A study on district health administration", *Bulletin of GIRH & FP*, vol. 12, no. 1, p. 1-50.

RAMESH, A., and B. HYMA (1981), "Traditional medicine in an Indian city", *World Health Forum*, vol. 2, no. 4, p. 495-499.

RCH PROJECT (2000), *Reproductive and Child Health Project, Rapid Household Survey, Phase I, 1998*, International Institute for Population Sciences, Mumbai.

SATHYAVATHY, G. V. (1982), "Some traditional medical system and practices of global importance", *Indian Journal of Medical Research*, vol. 76 (supplement), p. 1-26.

SEAL, S. C. (1981), "Primary health care in the rural setting in India", *Indian Journal of Public Health*, vol. 25, no. 2.

SHARMA, J. K., *et al.* (1978), "Time utilization of medical officers in the central government health schemes dispensaries", *Health and Population*, vol. 1, no. 2, p. 105-116.

SHUKLA, K. P., *et al.* (1980), "Role of traditional healers and implication in community health", *Research Findings*, vol. 12, no. 1-3, p. 12-15.

SIVA RAJU, S. (1987), *Regional Development and Family Planning*, Daya Publishing House, New Delhi.

SIVA RAJU, S. (2000), *Study of Children Born with Cleft Lips and Palates in India*, Impact India Foundation, Mumbai.

SRIKANTAN, K. S. (1977), *The Family Planning Programme in the Socioeconomic Context*, New York, The Population Council, cited in P. D. Malgavkar and V. A. Pai Panandiker, *Population and Development*, Bombay, Somaiya Publications, 1982.

SRIKANTAN, K., and G. E. RUBERT SAMUEL (1981), "Community system between district health office and health centre", *Health and Population*, vol. 4, no. 1, p. 66-78.

UNITED NATIONS (1994), *ICPD Programme of Action, 18 October 1994*, p. 9-118 (Document No. A/CONF. 171/13).

VENKATESWARA RAO, K. (2001), "Women's empowerment for health: Theory and practice", in: *Health Strategies and Population Regulation*, vol. 1.

WORLD BANK (1974), *Population Policies and Economic Development*, Staff report, cited in P. D. Malgavkar and V. A. Pai Panandiker, *Population and Development*, Bombay, Somaiya Publications, 1982.

WORLD HEALTH ORGANISATION (1978), *Primary Health Care. Report of the International Conference on Primary Health Care*, Geneva.

YADAV, S. S., and J. M. SHAH (1977), "Factors associated with high and low family planning acceptance in Karnataka State", *The Journal of Family Welfare*, vol. 24, no. 2, p. 3-19.

YESUDIAN, C. A. K. (1988), *Health Services Utilization in Urban India*, Mittal Publishers, New Delhi.

Part V

POLICY AND IDEOLOGICAL IMPLICATIONS

12

POLITICS AND REPRODUCTIVE HEALTH: A DANGEROUS CONNECTION

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1. Issues and purpose

After over 5 decades of debate on family planning and reproductive rights, after Cairo and in the era of globalization we would expect that issues relating to reproductive choice, including universal access to information and high quality family planning services in developing countries had been finally settled. By looking at the recent history of family planning in Peru, we hope to shed doubt on this assurance. Peru's policies on family planning and reproductive health have shifted during the past decade from a national priority based on vertical programs stressing female sterilization as the main strategy for poverty alleviation and population control during the Fujimori decade (1990-2000) to conservative fundamentalism under Toledo (2001-today) through the former health minister and current prime minister, whose administration has discontinued promotion of family planning services, banned emergency contraception, stopped services for adolescents and kept abortion illegal, erasing gender and reproductive rights from the official vocabulary.

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Some authors have argued that

> "in most of the developing world, the subject of the population policy debate is no longer whether family planning programs should be established and promoted, but ***how such programs are to be implemented***" (Finkle and McIntosh, 1994, p. 4, our italics).

We would like to question this view by arguing that the "how" is deeply linked to the "why". In other words that the debate, but more importantly, actual public policies on family planning and reproductive health in developing countries are still strongly influenced by ideology. Issues such as sterilization, providing contraceptive services to unmarried adolescents, emergency contraception and specially abortion are not only subject to intense debate and diverse policies, but linked tightly to ideological and cultural values and beliefs. In countries with weak public institutions, frail democracies and absence of an independent public career, ideology shapes and governs policies pertaining specially to reproduction and sexual health.

However, this conservative backlash is not only a national phenomenon. In the era of globalization ideological ties are international and able to shape both national as well as international policies. The follow-up to the Cairo international conference will probably be cancelled by the very same international organizations that were behind the 1994 event to avoid loosing ground on reproductive rights and family planning issues. UNFPA is suffering its worst financial crisis after President Bush decided last July to cut USA support, deeming it guilty by association with China's one-child policy despite its own administration report that failed to proof such linkage (Jacobson and Mallik, 2002). USAID international support to family planning is facing strong criticism from the conservative right in the US congress.

Taking into account this new international and national scenario, we would like to suggest the following issues both as themes requiring further research and as areas that merit special attention in policy formulation:

a) Ideology and cultural beliefs and values regarding sex, reproduction, marriage and the family are key in shaping national reproductive health policies and programs. However support for research on these issues is meager and instead has concentrated on the "how", assuming that these issues have been settled in favor of gender equity, reproductive choice and informed consent.

b) There are no effective mechanisms for endorsement and compliance with international agreements such as the ones subscribed by 174 nations in the Cairo International Conference on Population and Development or in Beijing regarding gender equity. Thus reproductive health and gender policies and programs are basically shaped at the national level and strongly influenced by the ideology and cultural values of those in power.
c) In countries with weak public institutions it is up to civil society to avoid discretionary policies in sensitive areas such as human rights, gender equity and reproductive and sexual health and choice. However our understanding on how civil society organizations operate, establish linkages and influence policy is poor. This hinders the effectiveness to support, enhance and consolidate civil society institutions for better governance and assurance of human rights.

We hope to illustrate these assertions by examining the recent development of family planning policies and programs in Peru.

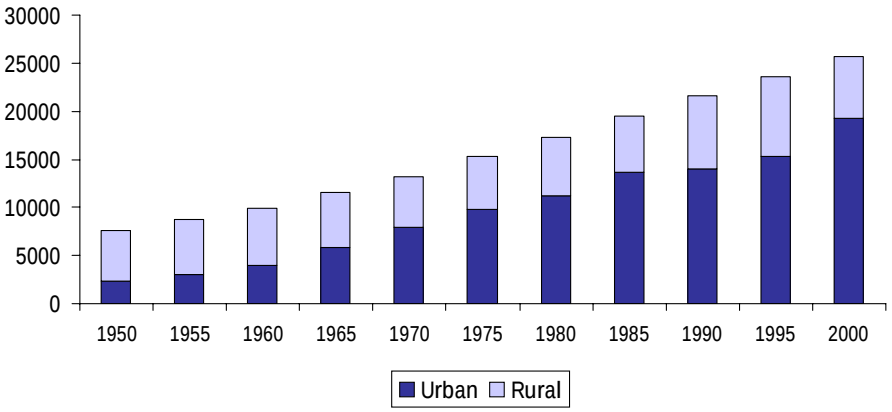
2. Peru: Background

Peru is the fifth largest country in the Americas and the third largest in South America (after Brazil and Argentina) with a territory of 1,285 square kms. After almost 4 centuries of Spanish colonial rule, it became an independent republic in 1821. Peru has 3 main geographic and cultural regions: the coastal area, with 11% of the territory, harbors over half the total population (including the capital Lima, with almost a third of the population) and is the most western and modernized region; the highlands, cradle of the quechua culture, has 26% of the territory and 35% of the population and is based mainly on peasant agriculture and mining; and the Amazon region, with 63% of the land, contains only 15% of the population with an economy based on forestry, ranching and subsistence agriculture.

After a sharp demographic decline during the second half of the 16th century which reduced the native population from around 6 million to around 350 thousand by 1683 (Rosenblat, 1954), Peru's population grew slowly until the 1950s. The 1940 census reported 6.2 million; it had taken 400 years for the population to reach its pre-colonial levels. Since the 1950s, however, a demographic explosion occurred; from

7.6 million to almost 25.7 million by 2000. Population increased by 338% in only 5 decades (Graph 1).

Graph 1
Peru: Population growth by area, 1950-2000 ('000)

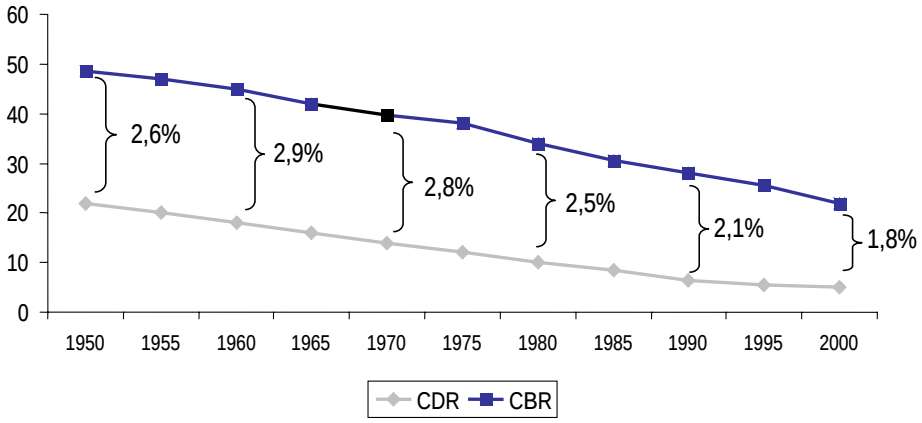


Source: INEI, National Census, and author's estimates.

The causes were a sharp mortality decline (the Crude Death Rate (CDR) dropped from 22‰ to 8‰) and high fertility until the late 1970s (the Crude Birth Rate (CBR) was around 48‰ until the late 1960s and fell to 28‰ only in the late 1990s) (Graphs 2 and 3). Most of this growth concentrated in cities due to high rural-urban migration.

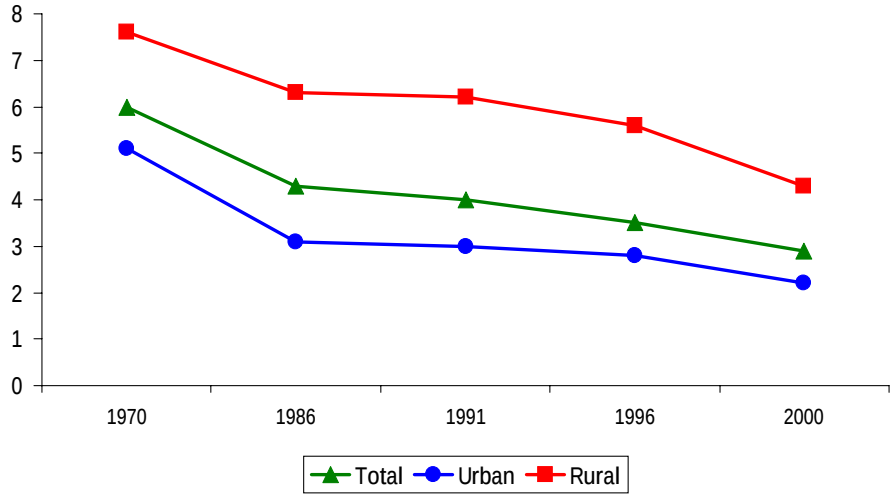
Up to the 1950s the Peruvian society was backward and traditional; 75% of the population was rural, mainly composed by poor peasants; illiteracy comprised 60% of the adult population, the Infant Mortality Rate (IMR) was around 181‰ and average growth of GDP was 1.89% between 1929-1947 (Aramburú, 1984). By 2000, around 73% of the population is urban, illiteracy has dropped to around 12% of adults; the IMR has fallen to 38‰ but GDP still shows an erratic and low growth average (1.71% between 1973-1995). In fact, social indicators seem to have improved much more than economic indicators; 28% of the workforce still depends on subsistence agriculture (contributing with only 6% of GDP), and 23% is composed of unqualified urban workers mostly self-employed, contributing only with

Graph 2
Peru: Crude Birth Rate, Crude Death Rate,
and Natural Increase 1950-2000 (‰)



Source, INEI, National Censuses 1961, 1972, 1981, 1993, and projections.

Graph 3
Peru: Fertility trends (TFR), 1970-2000



Source: DHS, 1977-1978, 1986, 1991-1992, and 2000

11% of GDP. Poverty afflicts 54.8% of Peruvians, and almost 1 in 4 are considered extremely poor, with incomes below the cost of the food basket (INEI, 2002).

The country has an unstable political record over the last century with frequent military regimes and a weak democracy linked to a recent legitimacy crisis of traditional political parties. Terrorism during the last 15 years claimed over 20,000 lives and contributed to political and economic instability.

3. Population policies and programs

3.1. The beginnings

Despite dramatic changes in population dynamics since the 1950s, population issues and policies were only timidly formulated after 1975. In fact, as late as 1974 under the leftist military regime of Velazco, private family planning programs were shut just months before the Bucharest International Conference on Population. Furthermore, during this first international conference Peru's delegation, presided by a general, joined the group led by Argentina, China and Algeria that opposed the "controlist" block formed by the USA, western Europe, India, Indonesia and Bengal (Bonfiglio, 1999).

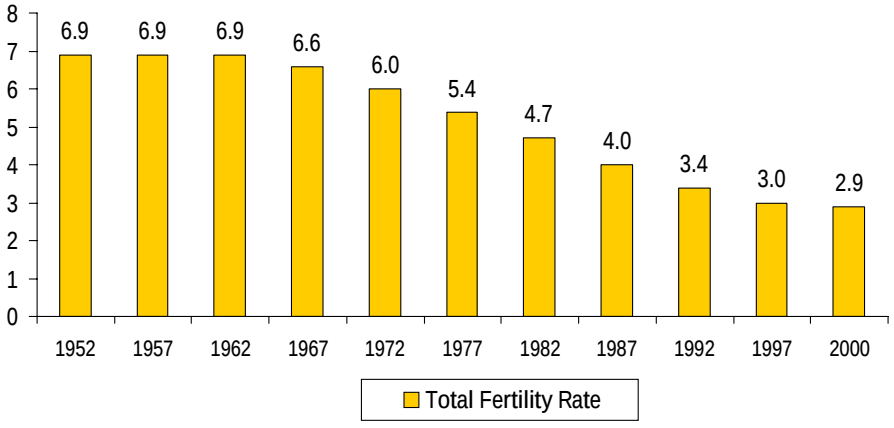
The first sign of official concern on population issues was the "Guidelines for a Population Policy" formulated in September 1976 by the more conservative second phase of the military regime under Morales Bermudez, who had ousted Velazco in August 1975. Instrumental to these changes were public health researchers that had promoted demographic studies since the mid 1960s in a publicly funded think tank (CEPD) and a group of social scientists working in the National Planning Institute under the leadership of a US-educated Jesuit priest. The influence of the Bucharest conference coupled to the results of the 1972 census and the failure of the Agrarian Reform of Velazco to stop rural to urban migration and improve living conditions of the poor also played into this policy change.

The "Guidelines" of 1976 acknowledged the right of couples to determine family size and expressed the need to shape the demographic structure to national security and development goals. However in several press interviews, the Minister of Health rejected "neomalthu-

sian population control" and stated that its contents had been consulted with the Catholic Church (Bonfiglio, 1999, p. 21). This policy had no practical results since public family planning programs were not implemented nor health or demographic goals established. In fact, as late as 1979 the Ministry of Health (MOH) cancelled the "fertility regulation" programs offered in some public hospitals with funding from UNFPA.

During the 5 years of Belaunde's democratic regime (1980-1985) that followed 12 years of military rule, the first attempts to institutionalize population policies and family planning programs were initiated. During his first year in office, the National Population Council (CONAPO) was created, a decision that was influenced by prominent physicians from the ruling party. This group, that included economists and social scientists, had been actively involved in research and dissemination of population issues since the mid 1970s through two NGOs (AMIDEP and INANDEP). The census of 1981 showed that population had increased by over 3.5 million in less than a decade, and the 1977-78 DHS confirmed that fertility was still high at 5.24 children per woman (Graph 4), and more importantly that 62% of married women wanted no more children and that fertility was in fact higher in the areas where a larger proportion of women wanted fewer children

Graph 4
Peru: Total Fertility Rate (TFR) 1952-2000



Source: INE, DHS 1977-1978, 1986, 1991-1992, and 2000.

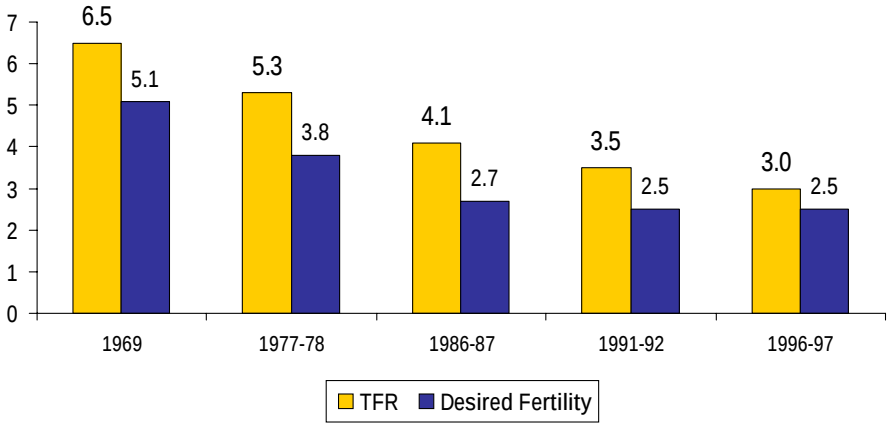
(Aramburú, 1984). Family planning services, excluding sterilizations, were cautiously re-established in the main public hospitals led by the Social Security Institute. Private organizations, namely INPPARES, the IPPF affiliate, also resumed contraceptive services including voluntary sterilizations. These internal events coupled to the second International Conference on Population that took place in August of 1984 in Mexico, where the Peruvian delegation presided by the president of CONAPO took a more favorable position towards family planning, led to the promulgation in 1985 of the National Population Law.

Peru's Population Law established the rights of couples to information and family planning services but excluded, in the same article, sterilization and abortion as contraceptive alternatives. This wording was included as a compromise with the Catholic Church and as a consequence of a strong media campaign led by conservative catholic groups that included two bishops and several physicians. The focus of this media campaign was INPPARES, the main NGO providing family planning services, but its real target was the new population law. Opposition to family planning had shifted from the Marxist left to the conservative right, and the content from a discussion on development alternatives to ethical and religious considerations (Bonfiglio, 1999, p. 48). This change of mind of the Marxist left requires further study but it might have been related to the shift of population policy in China towards the one-child family (White, 1999), its proximity to the nascent feminist movement in Peru and the recent evidence from fertility surveys that the majority of poor families wanted less children.

Despite these changes in both official institutions and policies, little changed at the services level. Family planning was still restricted to a few public hospitals, sterilization was not offered as a method and few active campaigns on information on reproductive rights were implemented. In fact, the largest gap between actual and desired fertility was recorded during those years (Graph 5).

In 1985 the center-left government of Alan Garcia was elected. Shortly after, the young president addressed the issue of rapid demographic growth: "what historic legacy can we leave to our children if by 2000 we will have 30 million inhabitants?" was his message during a conference with the business community in 1986. In early 1987, a Presidential Commission on Population was created to prepare the first National Population Program 1987-1990. This program was officially

Graph 5
Peru: Fertility trends, 1969-1997



Source: INE, DHS 1977-1978, 1986, 1991-1992, and 2000.

approved in April 1987 and was the first one to establish a demographic goal: reduce population growth from 2.52% in 1987 to 2.2% in 1990. That same year, family planning services were expanded through a grant of 40 million dollars from USAID (24 million) and UNFPA (16 million). In 1988 a group of government congressmen launched a legal initiative to change the Population Law and allow voluntary sterilizations as a contraceptive method. This initiative was approved by the lower house in Congress but rejected in the Senate. Again fierce opposition from the Catholic Church and conservative physicians supported by the right wing media jeopardized this policy change. In fact, a catholic bishop voiced his opposition to this measure by stating "Why don't politicians castrate themselves?" (*La Republica*, April 21, 1988). By the end of that year, the economic crisis was widespread (inflation exceeded 2,000%), terrorism from Shining Path was sweeping the country and the government had lost all credibility. Family planning services languished due to lack of funds and mismanagement. The CONAPO faced its worst crisis since its creation with no projects and serious mismanagement.

3.2. The Fujimori decade

3.2.1. The first five years

In July 1990 a complete stranger to Peruvian politics, Alberto Fujimori, a mathematician and university professor, was elected president defeating Mario Vargas Llosa, one of Peru's most prominent writers. Fujimori took over a devastated economy, plagued by hyperinflation (800% in 1989), corruption and increasing terrorist activity. Just 3 months after taking office, the new president announced a "birth control policy" not only because of demographic reasons, but as a way to "provide equal opportunity of access to contraception for the poor". The traditional demographic argument was thus complemented by one based on equal rights and focussed on the individual and the family. However, the wording revealed the signs of a vertical, authoritarian style that was to be the main weakness of the program in years to come.

Once again, conservative catholics, led this time by their highest authority, the archbishop of Lima, rejected this initiative by stressing support to "responsible parenthood" but only through "natural methods". He declared in November 1990

> "…artificial contraceptives is a correction intended by man on God's plan; and ¿Who is man to correct it?".

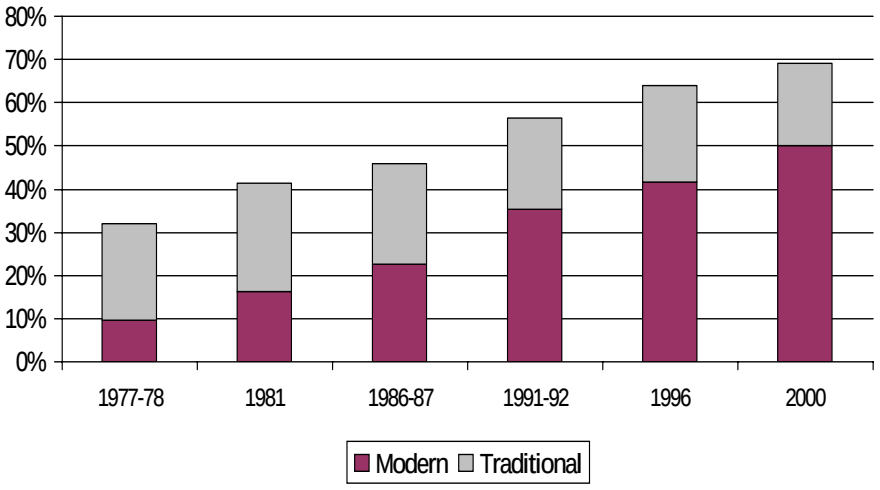
A survey made by an independent firm earlier that same month showed that 82% of Peruvian catholics approved the use of "artificial" contraceptives and that 41% were using them (cited in Bonfiglio, 1999, p. 84).

By the end of that year, the bishop of Chimbote, known as the "bishop of shanty towns", published a book opposing family planning and using a typical leftist argument: "demographic imperialism" claiming that international aid from the World Bank and USAID was tied to birth control programs. Further opposition came from right wing parliamentarians and the Supreme Court, whose collision path with Fujimori ended in the destitution of all its magistrates in April 1992.

Despite the fact that 1991 was declared by the government "Family Planning Year" the lack of public funds, the focus on economic policies to reduce high inflation, the war against terrorism (Shining Path leader Abimael Guzman was finally captured in September 1992)

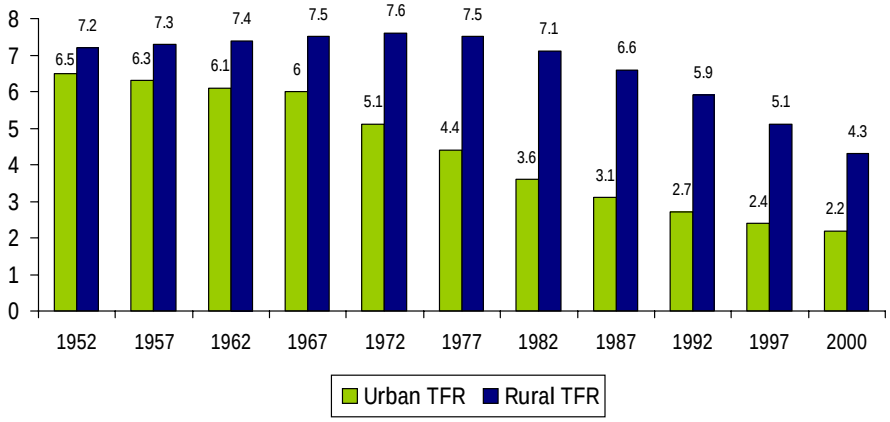
and legal barriers against sterilizations kept the national family planning program progressing at a very low pace. The Contraceptive Prevalence Rate (CPR) among married women had increased slowly from 32% in 1978 to 41% in 1981; 46% in 1986 and 59% in 1992 (Graph 6). However traditional methods such as rhythm and withdrawal comprised almost half of total prevalence even in 1992 (Ferrando, 1995). This same source estimated that 60% of all births were unwanted and that half of them ended in induced abortions, despite it being illegal in Peru (Ferrando, 1995, p. 104-105). Maternal mortality was a regional high at 261 deaths per 100 thousand live births and average age of deceased mothers was 29 years (Vallenas, 1993). Fertility differentials were huge; rural women had twice as many children as urban ones (Graph 7) and college educated women had a below-replacement TFR of 1.9, while illiterate women (around a fourth of women aged 12 and older) had a TFR of 7.1. Reproductive rights were real only for the wealthiest, more educated sectors of Peruvian society (Aramburú, 1995).

Graph 6
Peru: Contraceptive prevalence



Sources: INE, DHS 1977-1978, 1981, 1986, 1991-1992, and 2000.

Graph 7
Peru: Trends in rural and urban fertility



Sources: Aramburú, 1983; DHS 1986, 1991-1992, 2000

3.2.2. The second phase: 1995-2000

In this context of verbal support for family planning, diminishing terrorist activity, economic recuperation and shortly after the Cairo conference, Fujimori won his re-election in April 1995 with 64% of the votes. His closest rival got only 22%. During his opening speech in Congress, the re-elected president announced stronger support for a "birth control" national program. Lima's archbishop, who had supported Fujimori's rival candidate during the 1990 election, declared that "artificial" contraceptives were abortive just one day after the president's acceptance speech (*El Comercio*, July 29, 1995). A few weeks later the Bishops National Conference issued a public proclamation repeating their opposition to artificial methods, implying international pressures behind this policy, and denounced the authoritarian character of birth control.

That same year, in September, with 70 favorable votes and 23 against, Congress approved a modification to the National Population Law of 1985 that allowed sterilization to be offered as a family planning method. This measure amounted to a war declaration with the catholic right. Both civilians and Church authorities launched an in-

tense media campaign opposing the measure. The president called them "sacred cows" and stressed the fact that churchgoing rich people were using the very same methods the Church wanted to ban for the poor. Catholic bishops responded by stating that the government "would not succeed in shuting them up". Specially active in this debate were members of Opus Dei, a conservative catholic civil organization who had and has prominent members in Peruvian politics. Interestingly, the debate cut across partisan lines: opposition to a strong family planning program included members of the ruling party as well as from the opposition; support also came from both sides. The Medical Association also supported this change, although a few fundamentalist catholic physicians (the same ones who had opposed the population law of 1985) declared strongly against it. The leftist groups were mainly quiet as were the feminists. General opinion was clearly in favor of these changes: 79% approved public support to all family planning methods and 52% thought the Church's opposition was mistaken (quoted in Bonfiglio, 1999, p. 129)

Two other events need to be briefly mentioned. In September 1995 Fujimori, unexpectedly, decided to attend the World Summit on Women and Development in Beijing. He was the only male head of State present and made a firm declaration in favor of women's choice in reproduction as a measure in the war against poverty. His declarations received broad international and national attention. The second event was the initiation in early 1996 of a sex education program in public high schools. This time, however, the catholic bishops conveyed a more cautious message: the Church would not oppose sex education in schools if the teaching materials were reviewed to include family and parenting values. The Government agreed through the Minister of Education: the first versions of the teaching materials were stopped and revised. A temporary truce had been reached.

This debate which raged for almost a year in the media was unprecedented in Peru for several reasons:

a) It was the first time a president opposed the Catholic Church in a direct confrontation. The larger issue of the non-religious nature of the State was a crucial element in this debate.
b) The debate cut across political boundaries and affiliations and was based more on cultural beliefs and religious orientation.
c) There was a mixture of arguments from both sides: the government used as arguments reproductive rights (providing the poor with the

same opportunities the rich had) and economic arguments (family planning as a key intervention to reduce poverty); the Catholic Church and its advocates turned both to religious considerations (tubal ligations and vasectomies are equivalent to murder since they interfere with God's plan) or pseudo-scientific arguments (vasectomies are equivalent to castration and tubal ligations to mutilation) as well as the traditional leftist argument about "demographic imperialism".

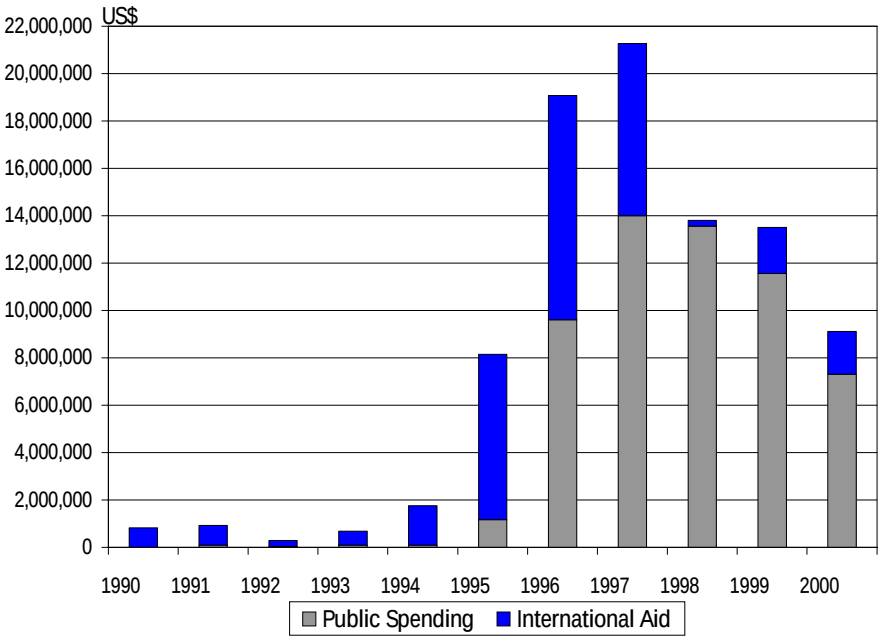
d) The ample public support for these policies that, however, was not reflected in the media, who seemed more interested in polarizing the debate by giving equal coverage to both sides. This was clearly a case of the "silent majorities".

3.2.3. Program changes

Starting in 1995 and as a direct result of Fujimori's interest and direct involvement in the program, key changes were made in the National Family Planning Program (NFPP). Among the main ones were:

a) Public funding increased significantly and for the first time exceeded international aid. Between 1994 and 1997 total funds increased over ten times from less than 2 million US dollars to 21.5 million. Strong national and international criticism starting in 1997 dried up international support starting in 1998. Public spending also decreased after 1998 but at a slower pace (Graph 8).
b) Program management and goals were set at the local level. Fujimori attended planning meetings with regional health directors and the regional NFPP coordinators stressing his personal interest in the program. In a vertical bureaucracy response was swift.
c) Independent maternal and reproductive health programs were integrated under the NFPP: Maternal Health, Adolescent Health, and Cervical Cancer Prevention.
d) Contraceptive procurement and logistics was handed to private firms under public contracts with USAID and UNFPA support.
e) An intense information campaign was launched involving both counseling and service provision. Mobile MOH teams performed tubal ligations in improvised clinics and tents in the rural areas.
f) All family planning services, including contraceptives and sterilizations, were provided free of charge.

Graph 8
Peru: Financing family planning, 1990-2000

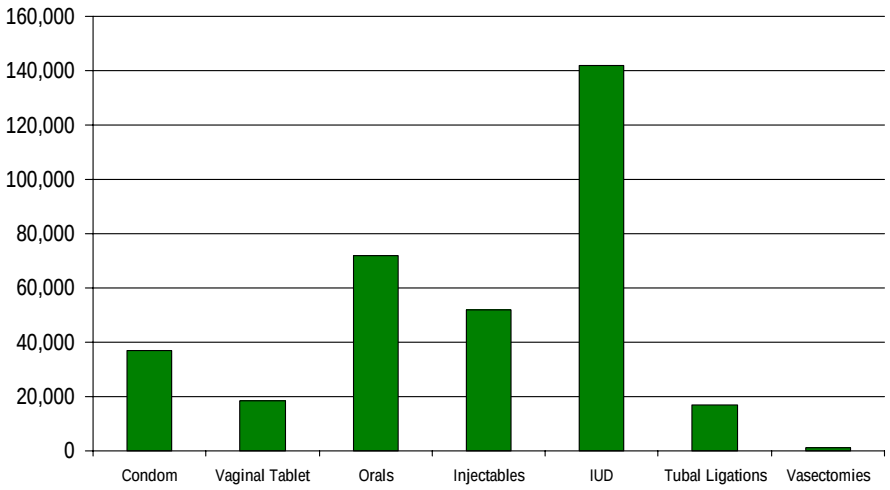


Source: MOH, NFPP, Program statistics, Lima 2000

The impact of these program changes in number of acceptors per year in the NFPP was dramatic (see Graphs 9 and 10). Between 1994 and 1997 condom users rose from less than 40 thousand to over 75 thousand; acceptors of oral contraceptives rose from 70 thousand to 150 thousand; use of injectables saw the largest growth, from around 50 thousand to over 265 thousand per year; and tubal ligations quadrupled from 18 thousand to over 80 thousand. However, IUD insertions on the other hand decreased from around 140 thousand to 100 thousand per year.

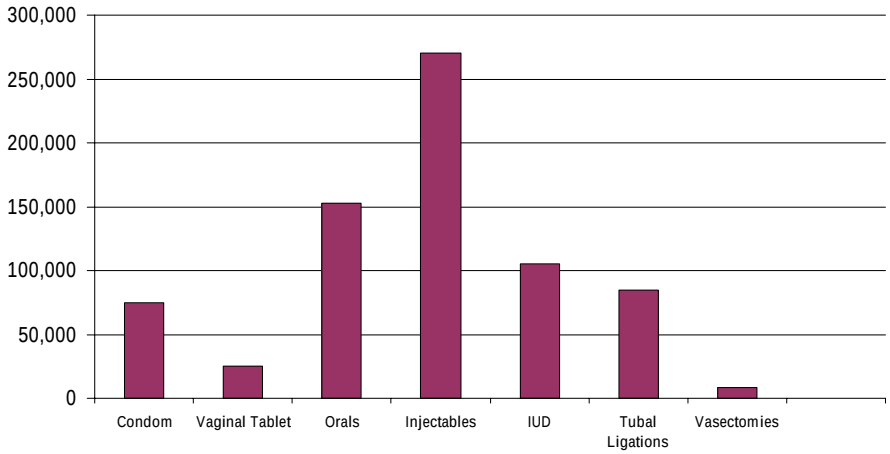
As noted before, CPR had been increasing steadily since 1986 (from 46% to 59% of married women of reproductive age in 1991), in fact during these years CPR rose by 2% per year. By 1996 it rose to 64% and reached 69% in 2000 (see Graph 6). This slower growth during the Fujimori years could be explained by the fact that contraceptive

Graph 9
Peru: Family planning acceptors, 1994



Source: MOH, NFPP, Program statistics, Lima 1994

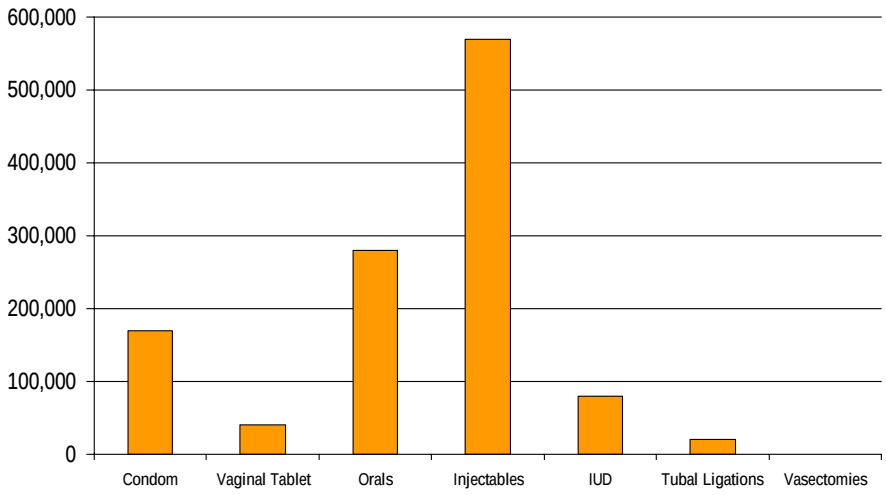
Graph 10
Peru: Family planning acceptors, 1997



Source: MOH, NFPP, Program statistics, Lima 1997

prevalence was already moderately high and thus harder to raise. The most important changes were in method mix and in the shift away from traditional methods, which dropped from 50% to 27% of total CPR between 1986 and 2000. The two methods that showed sharp increases during this period were injectables which rose from 2% to 22% and tubal ligations that rose from 13% to 19% of CPR (Graphs 11 and 12). Precisely around the issue of sterilizations was the controversy that finally contributed to halt Fujimori's population program.

Graph 11
Peru: Family planning acceptors, 2000

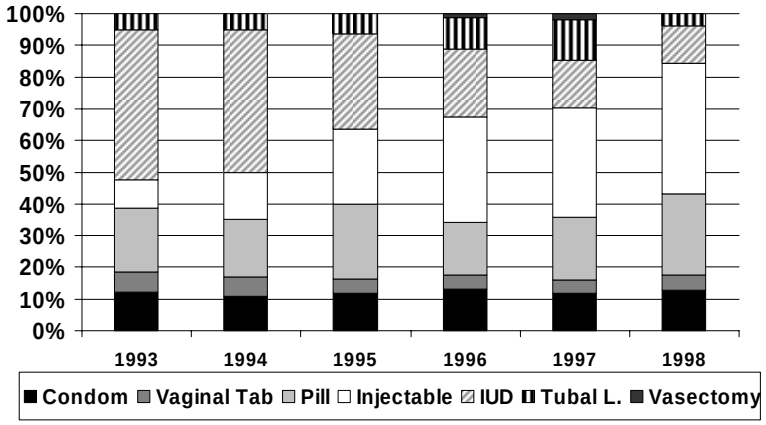


Source: MOH, NFPP, Program statistics, Lima, 2000

3.2.4. The issue of forced sterilizations

Between 1993 and 1999 over 314 thousand tubal ligations and 18 thousand vasectomies were performed by public health services. Peaks were reached in 1996 and 1997 with 82 thousand and 110 thousand tubal ligations respectively. In early 1996 and then again at the beginning of 1997 Fujimori had personally participated in workshops with the local health directors to stress the government's priority for family

Graph 12
Peru: Public sector method mix, 1993-1998



Source: MOH, NFPP, Program statistics, Lima 1999

planning and sterilizations. It was unusual for a president to attend this type of meetings. The message was clear: the president had a personal interest in family planning, and specially in what was considered the most cost-effective methods: sterilizations. During a breakfast between UNFPA's director general, Ms. Nafis Sadik, and 4 ministers organized by CONAPO in July 1996, the prime minister Yoshiyama explained the economic reasons for reducing population growth. He seemed doubtful when Ms. Sadik stressed the need for contraceptive choice. Later the prime minister declared to the press

> "The government cannot reduce poverty efficiently if poor families continue having 7 children in average" (*Gestión*, July 12, 1996).

In public declarations the president and government officials stressed informed choice and denied any type of coercion. However, since mid 1996 and through 1999 criticism and accusations of forced sterilizations grew consistently. Initially, it was the same voices from conservative catholics and bishops who gradually shifted from religious arguments to questioning the way these procedures were being performed. Close links of the Catholic Church through their parishes with even the most isolated towns provided the information network on which these denouncements were based. What was new to this contro-

versy is that since late 1996 and with greater strength and loudness in 1997, feminist organizations and human rights groups joined in their opposition to the way the program was being carried out. National criticism became international since early 1998 when CLADEM (the Latin American and Caribbean Committee for Women's Rights) issued a public statement accusing Fujimori's family planning program of a systematic campaign of female sterilizations based on false promises, coercion and abuse, specially in the poorest rural areas of the country. In February 1998 a subcommittee of the US Congress held an open session to discuss USAID's involvement in supporting Peru's family planning program. This subcommittee was chaired by Chris Smith, a congressman known for his pro-life and conservatism, who wanted to stop USAID support for the NFPP equivalent to 7.2 million dollars per year. His accusations were based on a field report carried out by Mr. Joseph Rees who had visited Peru in January, invited by Dr. Solari, medical advisor of the Peruvian bishops. The MOH of Peru presented a document in Washington during that session that stressed informed choice, the small number of complications and detailed changes being implemented to ensure informed choice and improve quality of counseling and services.

Starting in late 1997 a third player entered the scene, the Ombudsman's office, led by a highly respected and impartial lawyer, started its own enquiries into the sterilization issue. Through several reports during 1998, 92 cases of complaints were reported which increased to 156 by early 1999. Complaints included lack of signed consent forms, insufficient information on reversibility, complications, lack of follow-up and unfortunately 11 deaths.

To respond to these pressures and accusations, MOH authorities started in early 1998 several changes that included:

a) Program targets and wording were modified: instead of "…ensuring that 100% of women accept a contraceptive method after delivery" the new program established that "…100% of women receive individual counseling on contraception at post-partum". Another significant change was that the target on CPR and TFR was worded in terms of unmet need.
b) Counseling for sterilizations was improved through revised guidelines that stressed informed choice, irreversibility and surgical risks. A waiting period of 72 hours was established between counseling and procedure and two signed consent forms required. Spouse con-

sent was not required but for illiterate persons, a literate witness had to certify that he/she had understood the procedure and freely requested it.

c) Training was intensified and certification of providers was established with no less than 10 procedures for surgeons, eliminating mobile teams. A 24-hour mandatory observation period was established and 2 post-procedure checkups required.
d) Information material and training on periodical abstinence was introduced in training of providers.

These changes were announced to a Congress Committee by the Health Minister in two hearings in January and March 1998. However the political scenario was changing quickly against Fujimori. His manipulation for a third re-election, increasing accusations of corruption and violation of human rights by his main advisor Montesinos and the slower pace of economic growth after the "El Niño" climatic phenomena of early 1998 meant a very unstable political and economic scenario. Family planning was associated with authoritarism and fear of sterilization was widespread among poor couples. Acceptors of voluntary surgical contraception (VSC) as reported in program statistics, dropped by 68% ; from 90 thousand in 1997 to around 26 thousand by 2000 (see Graphs 10, 11 and 12). Permanent damage had been done to the issue and the NFPP.

In April and June 2000 general elections took place with Fujimori running for a third time. Despite initial polls showing his rival Toledo to be ahead, Fujimori was declared the winner and took office in July. Fraud was evident and corruption was demonstrated through a video aired on September that showed his main advisor, Montesinos, paying off a bribe to the mayor of Callao. Fujimori fled the country in November 2000 after massive demonstrations in Lima and other cities of Peru. Montesinos was captured and sent to a military prison. What followed is perhaps one of the most bizarre chapters of recent political history: hundreds of videotapes showing payoffs, manipulation and plotting of the presidential advisor with prominent politicians, businessmen, media owners, entertainers, judges, military officers, etc., were aired through open TV for over a year. A climate of mistrust, indignation and disbelief permeated the country. This set the stage for the most recent chapter of the unfortunate story of family planning in Peru.

4. The conservative backlash

In July 2001, after 16 months of a transitional government, A. Toledo was elected president of Peru. Behind him were several groups, but one of the strongest ones was led by L. Solari, a conservative catholic physician that had acted in the past as medical advisor to the Episcopal Conference of Bishops. He was appointed Health Minister during the first year of the new government and then became prime minister. He belongs to a civil confessional group named "Sodalicios", the equivalent of a domestic Opus Dei. Dr. F. Carbonne, also of the same group and close friend to the prime minister, heads currently the MOH.

Although in public declarations both have stated that their own religious beliefs will not interfere with providing reproductive health services, independent sources, namely a report of November 2002 from the Ombudsman's office, indicate that:

a) Education and promotion of reproductive health and family planning has been stopped, damaging access to accurate information specially among poor rural women.
b) Several health facilities report lack of contraceptives or late provision of them.
c) Several public hospitals and centers are refusing to provide tubal ligations or vasectomies, either by referring patients to distant hospitals or by charging for these procedures.
d) Given this diminishing priority and access to permanent methods, some physicians are offering their patients these services in their private clinics, increasing cost and limiting reproductive choice and rights.
e) Emergency contraception, that was legally approved as part of free family planning services during the transition government, has been stalled by the current MOH authorities based on legal technicalities and moral arguments.
f) Free distribution of condoms is being restricted as denounced by AIDS prevention and support advocates.

In general, health policies under this administration, in contrast with other social programs, are characterized by a lack of transparency, participation and gender equity.

In Congress, an investigation commission on forced surgical contraception during the Fujimori era was formed in October 2001. The commission's report concludes that:

> "...there are indications that presume crimes against individual freedom, physical integrity, association to commit crimes and genocide" (VSC Commission report, June 2002, p. 110).

The commission recommends derogating the law that allows surgical sterilization as a family planning method.

Feminist groups and advocates for reproductive rights have reacted against this report, indicating that despite the fact that irregularities and abuses existed during the Fujimori regime concerning the NFPP, the accusation of genocide is unsustainable and more importantly, openly disagree with prohibiting voluntary sterilization as a family planning method. This report was signed by two of the three members and Congress did not accept it for legal action. Its president, a conservative catholic physician, resigned from his political party as a result of being unable to obtain their support in Congress to act on it. Another commission has been formed, this time with members from three different political groups, to substantiate this report. Their final decision is still pending.

The final element in this never-ending story is the organization of over 150 institutions and 1,200 individual members in a civil society health network called FOROSALUD. Born during the last months of Fujimori's authoritarian regime, this civil society movement has been acting as the "watchdog" of the current health policy and is represented in the National Health Council, a 9-member group that oversees public health policies and programs. This is perhaps one of the few bright lights in the recent and unfortunate process of health policies and in particular reproductive health in Peru.

5. Lessons learned

What can be learned from these complex, contradictory and poorly understood processes? More importantly, what can be done about them, considering that real persons, specially poor women, have suffered in the process either because of forced and poor quality sterilizations and presently because of lack of access to reproductive health services?

We must declare our incompetence to answer these questions fully. Perhaps what we can do is suggest some issues involving both research needs and policy implications.

a) Reproductive and sexual health policies and programs are still being shaped by the ideology of those in power. This is not only a phenomenon of poor developing countries as recent events in US international policy show. However, the consequences of either authoritarian politics or conservative fundamentalism afflict specially the poor of developing countries where reproductive health depends on public health information and services.
b) Our understanding of the linkages between ideology and reproductive health and how it shapes policies and programs is to say the least, insufficient. Much research and funding has gone into the "how" of reproductive health and family planning programs, ignoring the fact that the "how" is closely linked to the "why". This also means that understanding and promoting sexual and reproductive rights should be a priority for the political and cultural sustainability of these policies and programs.
c) Opposition to family planning and reproductive health policies and programs, at least in Latin America, has shifted from the Marxist left to the conservative catholic right. Thus it is not related to development theories but to deeply held cultural beliefs regarding sexuality, the family, gender and cultural issues. Frequently these beliefs cut across political lines and affiliations. Our understanding of how these values are formed and transmitted to new generations of leaders is crucial to ensure more humane and consistent policies regarding reproductive and sexual rights.
d) Civil society movements can and should have an increasing role in shaping, advocating and watching over policies dealing with civil and economic and social rights. In developing countries, however, many of these movements lack links with the poorer sectors, work in isolation from each other and are either suspicious or removed from political parties. Many also depend heavily on international donors for their operations.

References

ARAMBURÚ, Carlos E. (1984), "Tendencias demográficas recientes en el Perú", in: *Población y Desarrollo en el Perú*, INANDEP, Lima.

ARAMBURÚ, Carlos E. (1995), "Dinámica demográfica y política de población en el Perú", in: AMIDEP, *IV Reunión Nacional sobre Población*, Lima, p. 60-82.

BONFIGLIO, Giovanni (1999), *25 Años de Debate sobre Temas de Población en la Prensa Peruana: 1974-1999*, AMIDEP, Lima.

FERRANDO, Delicia (1995), "Algunas consideraciones sobre la salud reproductiva en el Perú", in: AMIDEP, *IV Reunión Nacional sobre Población*, Lima, p. 96-116.

FINKLE, Jasón, and Alison MCINTOSH (1994), "The new politics of population", *Population and Development Review*, Supplement to vol. 20, p. 3-34.

INSTITUTO NACIONAL DE ESTADÍSTICA (2002), *La Pobreza en el Perú 2001*, by Javier Herrera, Lima.

INSTITUTO NACIONAL DE ESTADÍSTICA (1976, 1986, 2001), *Encuestas Demográficas y de Salud*, Lima.

JACOBSON, Jodi, and Rupsa MALLIK (2002), *The Far Right, Reproductive Rights and US International Assistance*, Center for Health and Gender Equity, USA.

MINISTERIO DE SALUD (1996), *Programa de Salud Reproductiva y Planificación Familiar 1996-2000*, MINSA, Lima.

ROSENBLAT, Angel (1954), *La Población Indígena y el Mestizaje en América*, Buenos Aires.

WHITE, Tyrene (1994), "Two kinds of production: The evolution of China's family planning policy in the 1980s", *Population and Development Review*, Supplement to vol. 20, p. 137-158.

13

GENDER EQUITY AND HEALTH POLICY REFORM IN LATIN AMERICA: ISSUES OF FAIRNESS IN ACCESS TO HEALTH CARE

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1. Introduction

> *"The pursuit of development, the engagement with the globalization and the management of change must all yield to human rights imperatives rather than the reverse."*
>
> (Koffi Annan, Secretary-General of the United Nations)

The recent impetus achieved by health sector reform policies throughout the Latin-American Region has given rise to an intense debate in governments, civil society, and multilateral agencies about the actual and potential effects of these policies on health equity and human development. Up to now, however, this concern has focused almost exclusively on geographical and income considerations without taking into account the differential impact of these policies on women and men. The absence of this concern in the public debate has translated into a lack of policies to correct the gender inequities associated with these reforms that cannot be combated with the same measures

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employed to reduce the gaps between geographic locations and socio-economic strata.

The present paper has two objectives. First, to call attention to the most important implications of health sector reform for gender equity, with specific regard to: (a) access to, utilization and financing of health care; and (b) distribution of work and rewards in health care. The second objective is to propose a series of strategies to identify problems, mobilize resources and institutionalize mechanisms to achieve the goal of health for all.

The new health sector reform "movement" is not indigenous to each country. It is usually part of a larger package of development assistance in support of health sector programs. Therefore, along with government and national institutions, it involves external multilateral actors and, alongside with national specificities, it exhibits common denominators strongly linked to global processes.

Globalization is understood here as the increased integration of national economies stimulated by the liberalization of trade and capital markets, and rapid technological advances in the field of communication. Liberalization policies are cornerstone to this process. They call for deregulation of world and domestic markets, while restricting individual countries' ability to protect their own industries (pharmaceutical, insurance, for instance), and limiting government's scope for intervening in markets in order to support national priorities (Evers and Juarez, 2001).

Ideally, health sector reform has been conceived as

> "a process directed at introducing substantive changes into the various functions of the sector, with the purpose of increasing equity in the provision of health services, efficacy in its management and efficiency in the satisfaction of the health needs of the population" (PAHO, 1998, p. 13).

However, translating principles into practice has not always worked in favor of equity in a broad sense, let alone of gender equity.

The emphasis on gender does not reflect a reductionist vision of reality. On the contrary, the analysis starts out from the essential recognition that gender inequities interact with other types of social inequalities to affect risks and opportunities in health. Thus, any strategy to reduce gender inequities must inevitably consider the differences in class, ethnicity, and age that influence the nature and magnitude of gender inequities. The emphasis on gender reflects the need to shed

light on an important dimension of inequity that is frequently ignored and whose consideration is critical to achieving objectives of knowledge, social justice, efficacy and sustainability of interventions.

The paper is divided into four sections. The first one outlines the conceptual framework for the analysis. The second identifies major areas of gender inequity in health. The third examines some key repercussions of health sector reforms on gender equity in Latin America. And the final fourth discusses the main challenges posed by incorporating a gender equity perspective into health sector reform policies and proposes a pluralistic strategy to document, prevent, and contribute to eradicate gender inequities in health sector reforms.

2. Frame of reference

The concept of gender mainstreaming in health policy rests on four key concepts: health, equity, gender, and democratic participation.

2.1. Health

According to the definition adopted by the Pan American Health Organization/World Health Organization (PAHO/WHO), health

> "is a state of complete physical, mental, and social wellbeing, and not merely the absence of disease or infirmity."

Health, then, is a positive concept that emphasizes both physical capacities and personal and social resources. It is therefore neither the exclusive province of the health sector nor limited to individual healthy lifestyles (Ottawa Charter for Health Promotion, 1986). Achieving the highest attainable level of health is a fundamental *human right*, enshrined in the WHO Constitution since 1946.

By extension, *reproductive health***,** a central concern of this work, has been defined as

> "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed

> and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. In line with the above definition of reproductive health, *reproductive health care* is defined as the constellation of methods, techniques and services that contribute to reproductive health and wellbeing through preventing and solving reproductive health problems. It also includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and sexually transmitted diseases." (ICPD, 1994, Paragraph 7.2).

Reproductive health is also an *approach,*

> "when we use the language of ICPD, we talk about health needs, but we also talk about rights, equity, dignity, empowerment, self- determination and responsibility in relationships. Reproductive health is an approach to analyzing and then responding comprehensively to the needs of women and men in their sexual relationships." (ICPD+5, 1999).

2.2. Equity in health

Equity is not the same as equality, and not all inequality is considered inequity. The concept of inequity adopted by PAHO/WHO is reserved for inequalities that are *avoidable and unjust* (Whitehead, 1990). Equity implies that need rather than socioeconomic advantage is considered in decisions about resource allocation (Braveman, 1999, p. 2). Thus, while equality is an empirical concept, equity is an ethical imperative grounded in principles of *social justice and human rights*.

Different societies approach the concept of equity differently. In some, equity goals are seen in terms of the commitment to achieve a *minimum* level of health and health care for all, without attempting to reduce disparities once the most disadvantaged groups have attained that minimum level. This so-called "libertarian" approach focuses on the extent to which people are free to purchase the health care they want. For other societies, achieving the levels of wellbeing attained by the most privileged groups is the goal. In this regard, the advances made by the better-off groups are used as the parameters of what can

be achieved in that particular society, and equity is viewed as requiring a sharing of progress. This "egalitarian" approach judges equity by assessing the extent to which health resources are distributed according to need, and are financed according to ability to pay (see Braveman, 1999; Wagstaff and Van Doorslaer, 1993; Gilson, 1998).

For analytical purposes it is useful to distinguish between the broad notion of *health* and the more restrictive concept of *health care*. Health generally refers to *health status*, that is, physical, psychological, and social wellbeing. *Health care,* one of the many determinants of health status, refers to health services and their characteristics: access, utilization and quality, formal and informal provision, and health care resource allocation and financing.

- Equity in *health status* refers to the attainment by *all people* of the *highest* level of wellbeing that is possible in specific contexts;
- Equity in health care means that health resources are allocated according to *need,* services are received according to need, and contributions to health care financing are made according to *economic capacity (*Braveman, 1999, p. 3).

Therefore, as an ethical imperative, equity demands that needs be matched to resources, that is, giving more to those with greatest need.

2.3. Gender

Gender is not synonymous with sex. The term "sex" refers to the biological differences between men and women, while "gender"" involves the social constructs of "masculine" and "feminine" and the way in which they come together in power relationships.

Gender does not mean *women*, either. The focus of gender is not on women *per se*, but on the *social relations of inequality* between women and men and the impact of this inequality on people's lives.

In the past two decades, the social sciences have begun to recognize gender as one of the primary elements in the organization of social life. Beyond its micro psychological importance in the formation of subjectivity and the structuring of interpersonal relationships, *gender – together with class and race* – occupies a central place at the macro social level in the allocation and distribution of resources in a hierarchical society.

The importance of gender at the macro level lies in its integrative function of two complementary dimensions of the economy. On the

one hand, gender guarantees the existence of a realm of *unremunerated* work, known as *reproductive* work, which reproduces the workforce, disciplines it and puts it into circulation; on the other, gender conditions people's alternatives in the world of remunerated or *productive* work.

In the majority of societies, reproductive work falls predominantly to women. Productive work is performed by both men and women but within markets that are profoundly segmented by sex. The socioeconomic experience specific to women is found at the intersection of those two worlds – that is, in the interaction between their reproductive and productive roles. This interaction, plus the preeminence ascribed to the reproductive roles, subordinates women and places them at a disadvantage in terms of access to and control of certain material and nonmaterial resources necessary for attaining a high level of wellbeing.

Gender is also an *approach* that involves:

- Identifying and understanding the specific health *needs* of men and women that derive not only from biological sex differences, but also from differing socioeconomic conditions, gender prescribed roles, access to and control of resources, and decision making power. It departs from the approach of taking the family as homogenous analytical unit, but rather identifying intra-household asymmetries in access to and control of resources;
- Considering the interdependence between the formal and informal sectors of health care, which causes the policies affecting the supply of services to simultaneously affect the informal burden of care that falls predominantly on women;
- Acting *intersectorially* to promote the *empowerment* and active *participation* of women – especially from the most disadvantaged groups – in changing the conditions that stand in the way to the fulfillment of their health rights and the achievement of health for all.

2.4. Democratic participation

As just stated, democratic participation plays a critical role in effectively and sustainably meeting objectives of equity, social justice and health rights defense. This participation is conceived as the democratic exercise by women and men of their right to influence the processes that affect their health, and not as the simple partaking in actions prescribed by others, or as an instrument for cutting costs in service deliv-

ery. In this context it is important to underscore that, as highlighted by the United Nations Development Program,

> "in exercising real power or decision-making authority, women are a distinct minority throughout the world." (UNDP, 1995, p. 86).

The health system is no exception to this rule. On the contrary, it is in this sector that women are more frequently active participants in the execution of community programs while remaining excluded from the formulation, design, and resource allocation phases of these programs.

Women with their interests, needs, viewpoints, and demands, have not received recognition as a social group that merits representation and that must be accounted to. Decisions are usually made on behalf of women under the presumption of both their consent and a commonality of interests with men. This presumption, however, does not reflect reality, for when women are consulted, the priorities that they indicate for themselves and their families have been very different from those expressed by their closest male relatives, or distant politicians and bureaucrats (Ashworth, 1996, p. 10). It has been observed, for instance, that health is a higher priority for women that reflects in the ways in which men and women spend the household income that they respectively control (The World Bank, 1993), and in the fact that women more frequently organize themselves to deal with health issues than do men (Beall, 1996, p. 12).

Consideration of the particular needs of the various social groups both in policy making and in the accountability of policy executors – whether the State or the private sector – is not feasible without a civic culture that demands it. Given the special needs of women and their underrepresentation in political decision-making, promoting the participation of women's organizations is an inherent requirement of any democratic system. It is also essential for giving higher priority to health on political agendas and ensuring the sustainability of human development.

3. Gendered dimensions of health inequity

Gender equity in health translates into the absence of unjust, remediable health disparities between women and men that are associated with systematic socioeconomic disadvantages affecting either sex.

In analyzing health from a gender equity perspective, it is important to distinguish between *health status, health care use* (one of many determinants of health status), and *health development work*. It is also essential to address the distribution of the socio economic determinants of health.

Gender equity in these health-related dimensions may be understood as follows:

- in terms of the *social and economic determinants* of health, gender equity means equal access to and control of the resources that enable individuals and groups to exercise the right to health (food, housing, a healthy environment, education, information, work, wages, technologies, services, etc.);
- in terms of *health status*, gender equity would be reflected in the attainment by *all women and men* of the highest possible level of health and wellbeing;
- in terms of *health care use* gender equity implies that
  – resources are allocated according to the specific needs of men and women;
  – health services are received according to the particular needs of each sex, regardless of the ability to pay;
  – contributions by men and women to health care financing are based on their economic capacity, and not on the particular risks or needs faced by each sex at each stage of the life cycle;
- in terms of *participation in health care work*, gender equity demands a just balance between the sexes in the distribution of responsibilities (remunerated and unremunerated), rewards, and power.

3.1. Gender equity in health determinants

As already stated, gender is pivotal to the way societies operate. *Gender* is a stratifying force that, along with *class and race* determines how work is divided, how resources are allocated, and how benefits are shared among a population. Its influence translates into systematic differentials between women and men in terms of risks and opportunities, access to and control of resources necessary to attain and preserve optimal levels of health. Among these resources are education, information, income, food, housing, basic sanitation and drinking water, social protection, leisure time, and political power.

3.2. Gender equity in health status

Women throughout the world tend to live longer than men and to exhibit lower mortality rates at every age. This does not necessarily mean, however, that women enjoy better health. Mortality indicators reflect only the extreme deterioration of health and tend to conceal deep disparities in the wellbeing of those who survive.

Gender equity in health status does not mean equal mortality or morbidity rates for both sexes. It means the absence of *avoidable* differences between women and men in terms of opportunities to survive and enjoy health and the probability of not experiencing disease, disability, and premature death from *preventable* causes.

Within the general context of gender equity in health status, the following aspects should be emphasized:

3.2.1. The greater longevity of women is not, nor has it always been, the norm: hostile conditions in the social environment can reduce and even nullify the female survival advantage.

Lower mortality among women has not been a constant over time, and it is not true for all countries, age groups, and socioeconomic levels.

- Women's longer life expectancy, currently characterizing industrialized nations, did not exist in these countries at the early part of the 20th century, nor does it in certain African and Southeast Asian nations today (WHO, 2001, Statistical Annex). Higher female mortality has been associated not only with high maternal mortality rates during the reproductive years but also with patterns of heavy discrimination against women throughout their lives;
- In addition to the *15 to 49-year age group*, another group in which excess female mortality is found with alarming frequency is the *1 to 4-year age group* (Ravindran, 1986; Gómez, 1993). Given the acknowledged female biological survival advantage at the beginning of life – even *in utero* –, higher mortality in girls than in boys is a serious warning sign about possible discrimination against girls, particularly in the home;

- In Latin America and the Caribbean, the pronounced mortality differential between the sexes at the expense of males that was observed during the 1990s in "non-poor" social sectors dwindled and even disappeared in the "poor" sectors of certain countries (see Figure 1). This phenomenon stems from the fact that the proportional increase in mortality associated with poverty was greater for women than for men, thus illustrating the disproportionate damage that poverty inflicts on women's health (Figure 1a) (Gómez, 2002, p. 457-458).

3.2.2. The survival advantage does not necessarily mean better health or a better quality of life.

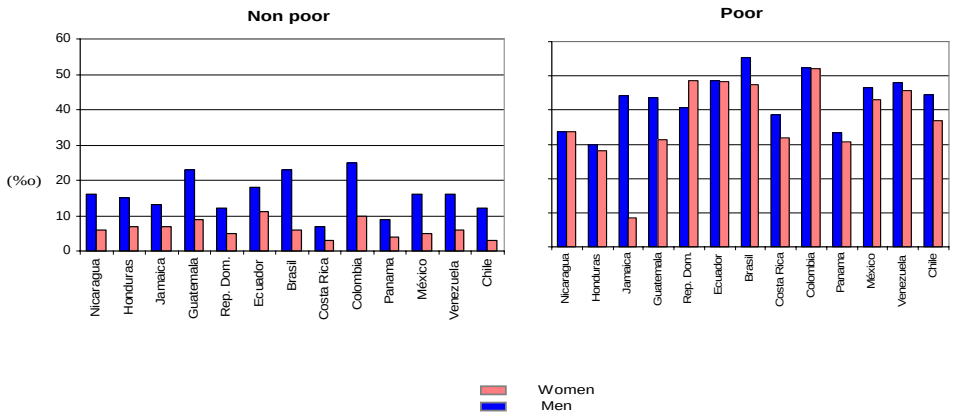
The empirical evidence shows that women tend to experience greater morbidity than men throughout the life cycle, expressed in a higher incidence of acute disorders, a higher prevalence of nonfatal chronic diseases, and higher levels of disability in the short and in long term (Verbrugge, 1990). Also, due to their greater longevity, women have a higher probability of experiencing chronic diseases associated with advanced age.

3.2.3. There are significant sex differences in the prevalence of *preventable* causes of premature death and disease.

According to the report of the WHO Commission on Macroeconomics and Health, mortality associated with preventable natural causes is considerably higher for women than for men in low- and middle-income countries.

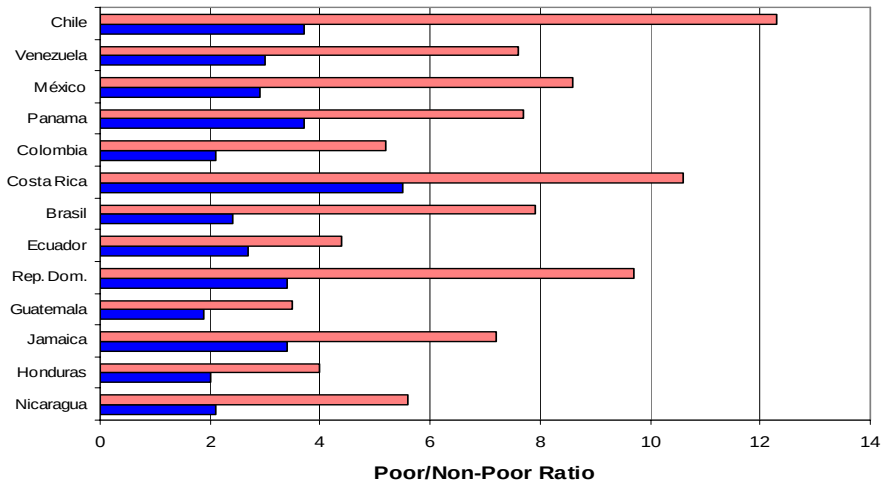
> "…avoidable mortality accounts for about 87 percent of the total chance of death among children up to age 5 in low- and middle-income countries. Among males aged 5 to 29, 60 percent of total mortality was calculated to be avoidable, while for females in the same cohort the figure was 82 percent, the higher level largely due to risks incurred through pregnancy and childbirth. Among women from 30 to 69, 51 percent of the mortality was avoidable; only among men in that range did avoidable mortality fall to less than half total mortality, at 43 percent" (Sachs, 2001, p. 42).

Figure 1
Probability of dying (per 1000) between the ages of 15 and 59 years
in selected countries of the Americas, by sex and poverty status, ca. 1996



Source: WHO, World Health Report 1999.

Figure 1a
Poor/Non-poor ratio in the probability of dying (per 1000) between the ages
of 15 and 59 years in selected countries of the Americas, by sex, ca. 1996



Source: WHO, World Health Report 1999.

Some examples of preventable causes are the following:

- *Conditions that exclusively affect one of the sexes and that are highly preventable by the health sector*
  - ✓ *Complications of pregnancy and childbirth* continue to be one of the leading causes of female mortality during the reproductive ages in the Region. Because of its avoidable and unjust nature, PAHO has referred to maternal mortality as the clearest reflection of the discrimination and low social status experienced by women;
  - ✓ Mortality from *cervical cancer* is clearly avoidable, given the availability of simple economical techniques for its early detection and treatment. Still it continues to be a main public health problem in the Region.
- *Conditions that differentially affect the sexes and that can be prevented by a series of intersectoral measures*
  - ✓ *Violence* is responsible for the greatest mortality differentials between the sexes and primarily affects men. The differential between the sexes in terms of deaths from accidents and homicides is closely related to the different roles and cultural expectations for women and men, in which "manhood" is associated with certain patterns of risk-taking, protection, and domination;
  - ✓ Violence against women is also related to patterns of domination that are tolerated and promoted primarily among men and is the crudest manifestation of the imbalance of power between the sexes;
  - ✓ Other significant differentials in terms of the mortality and disease, associated with risk behaviors that are more prevalent among men, are those linked with lung cancer, cirrhosis of the liver, and AIDS.

These examples serve to underscore that, even with different manifestations by sex, the rigid separation of roles, the unequal power relationships between men and women, and the social demands associated with the exercise of power (between and within genders) have clearly negative effects on the physical, psychological, and social integrity not only of women but men as well.

3.3. Gender equity in health care use

Health care is only one of the determinants of health; however, it is an important one, particularly for women. Despite the advances in

knowledge and medical technology, access to and quality of health care continue to be marked by profound inequalities *between* and *within* countries. Inequities in economic, geographical, and cultural access have been compounded by those created by recent sectoral reform policies that have promoted privatization and regressive financing schemes. In addition to restricting access to care, these policies can impose "impoverishing" costs on those who receive care, thereby deepening existing inequities in living conditions (Evans *et al.*, 2001).

Women's tendency to utilize health services more frequently than men cannot automatically be interpreted as an expression of social advantage.

Gender equity in health care use does not mean that men and women receive *equal amounts* of resources and services. It means that resources are allocated and services are received *differentially*, according to the particular *needs* of each sex, life stage, and socioeconomic context – irrespective of ability to pay.

3.3.1. The needs

As already stated, the notion of *need* is at the center of the analysis of equity in health care. According to principles of distributive equity, there must be a match between needs and services. Therefore, the groups with greatest need should receive more resources.

Women have a greater need for health services than men. In addition to the health problems women share with men, virtually all sexually active women of reproductive age require health services either to avoid or assist a pregnancy. Furthermore, as already noted, women present higher rates of morbidity and disability throughout the life cycle.

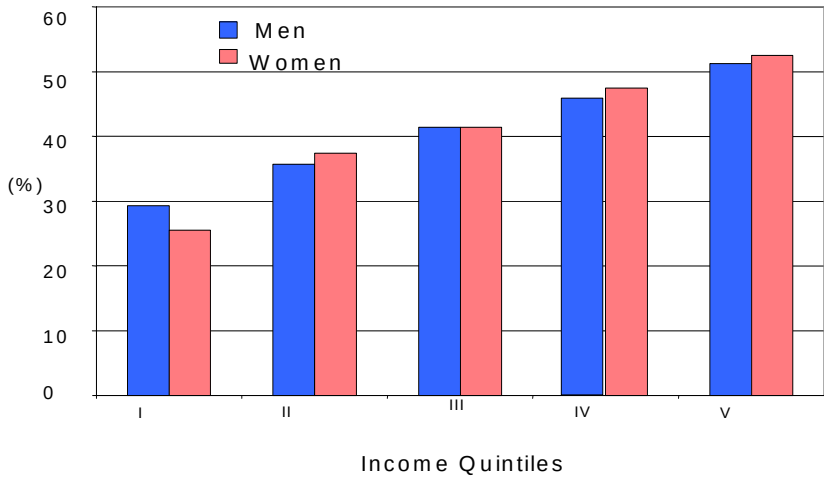
Equity in the differential utilization of services by women – and men – is a research issue that remains largely unanswered, almost unexplored. Without having need as a parameter for fairness, it is impossible to determine the extent to which lesser use of services by men – or women – is caused by lower levels of need or shortages of care. The task of operationalizing need is certainly a difficult methodological challenge, but it is also an essential requirement for the advancement of the equity agenda.

A frequently used *proxy* for need – taken from household surveys – is a person's experience of disease or accident during a given time period (whose extension varies according to the survey). This proxy has severe limitations, a main one being its restriction to curative care. Considering that reproductive health services fall heavily within the area of prevention, the use of this proxy produces a significant underestimation of women's health care needs. Notwithstanding this limitation, the information on health service use by persons experiencing health problems shows some interesting patterns that will be discussed here. Women's higher utilization of services is not always the rule. Sex differences in the utilization of health services are influenced by income, age, ethnicity, and place of residence, as well as by variables associated with the way such services are financed and organized. (The corresponding information has been taken from a PAHO coordinated research initiative on gender equity in access to health care services, that was developed in 5 countries of the Region.)

3.3.2. Patterns of health service use

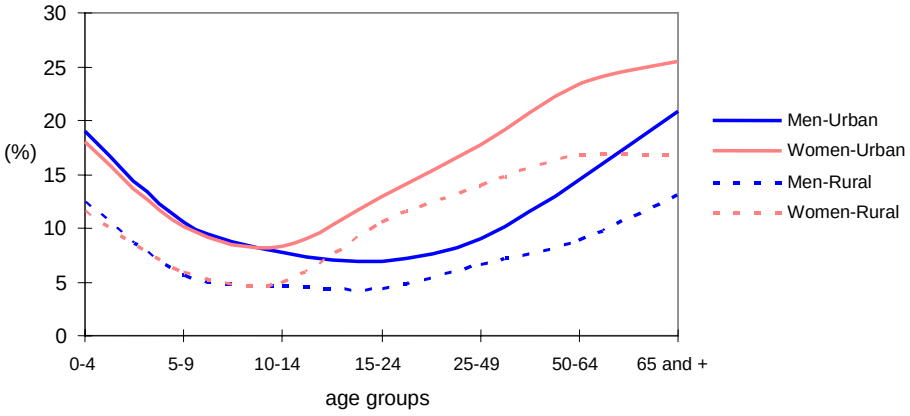
- *Socioeconomic status.* On average, the trend toward greater utilization of services by women crosses all levels of income and household expenditure. This trend showed some exceptions in low-income groups. Indeed, when controlled for need, the utilization of services by low-income women was no greater than that of their male counterparts, a phenomenon that could be appreciated at low income levels (Figure 2);
- *Age.* The largest gender differential and the highest utilization of services by women take place during the reproductive years. Gender differences in service utilization tend to decrease, and even to disappear in some countries, during advanced ages (Figure 3). In addition, studies in some developing countries (Gómez, 1993) suggest greater service utilization by boys than by girls during the initial years of life, and in some cases, through age 15;
- *Type of service.* Gender differences in the utilization of services vary according to the type of service actually demanded. Women tend to utilize health services for treatment and, particularly, for prevention, more often than men (Figure 4). Men, on the other hand, tend to utilize emergency services and, in some cases, hospitalization ser-

Figure 2
Percentage of persons with health problems who sought health care, by sex and household income, selected Latin American countries, 1994-1996



Sources: National Household Surveys of Bolivia, Colombia, Ecuador, Nicaragua, Venezuela, 1994-1996

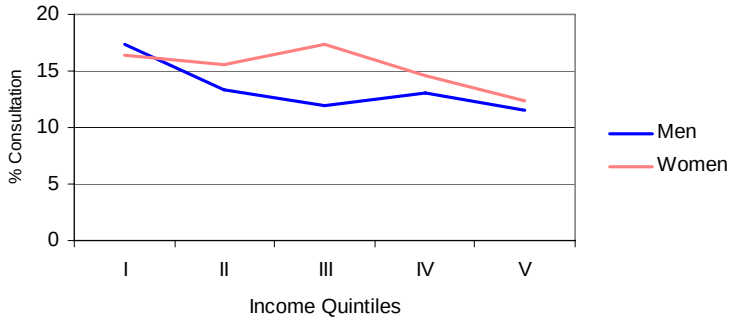
Figure 3
Percentage of persons with health problems who sought health care, by sex, age and area of residence, Brazil, 1998



Source: Brazil, National Household Survey, PNAD, 1998.

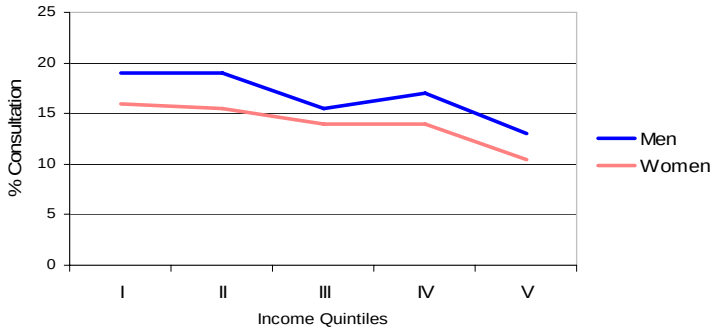
vices more than women, as suggested by Figure 5. These trends are due primarily to the differentiated nature of women's and men's needs – particularly, in the reproductive area, but they also may derive from gender differences in socialization with respect to health care and, possibly, from institutional factors that discourage preventive care for men;

Figure 4
Preventive consultation rate (%), by income and sex, Chile, 1998



Source: Vega *et al.*, 2001.

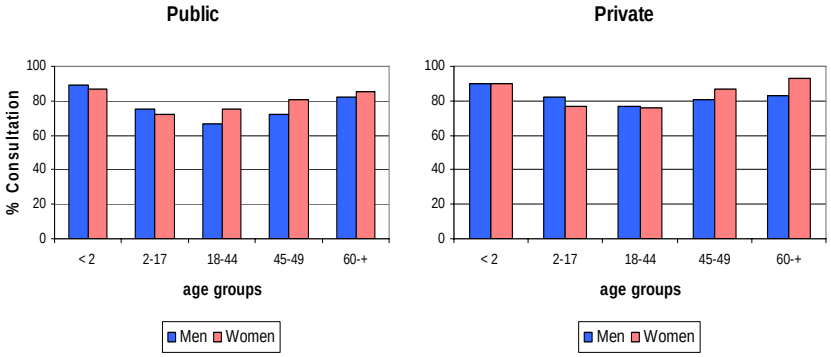
Figure 5
Emergency consultation rate (%), by income and sex, Chile, 1998



Source: Vega *et al.*, 2001.

- *Health insurance affiliation.* Access to and utilization of health services by sex shows substantive variations based on affiliation to different types of health insurance. Women tend to depend more than men on public insurance programs, as revealed in a study in Chile. Examination of the differential utilization by age and sex showed that private insurance covered the groups with the least risk of illness (young men), while the public sector includes more women of childbearing age and more older adults. Consequently, as Figure 6 shows, the higher utilization of services by reproductive-aged women (15-49 years) occurred in the public sector but not in the private one.

Figure 6
Percentage of persons with health problems who sought care, by health system affiliation, age and sex, Chile, 1998



Source: Vega *et al.*, 2001.

3.3.3. Unmet needs for reproductive health care

Operationalizing needs in reproductive health care is a complex task, but probably less so than finding reliable information on the degree to which these needs are met. There is a considerable body of information regarding the need and the provision of services for fertility regulation, antenatal and childbirth care. However, information is quite scarce on needs and provision of services with respect to sexually transmitted diseases, sexual violence and other dimensions of sexual and reproductive health.

The Demographic and Health Surveys (DHS)[2] constitute a reliable source of information on needs and responses regarding contraception and pregnancy-related services for 13 countries in the Region at specific points in time. The situation in 9 of these countries with information collected after 1990 is as follows:

- Non-use of contraception ranges between 72% in Haiti and 23% in Colombia. However, *non-use* cannot be taken wholly as unmet need, since such behavior may also derive from choice or other physiological circumstances that amount to temporary or permanent infertility. Adjustments for these factors have resulted in the more accurate DHS indicator of *unmet need for family planning*. This indicator, however, has been restricted only to women living in legal or consensual union, and discounts the needs of all other sexually active women in the population;
- The percentages produced by this indicator of unmet need for contraception in the year 2000 have ranged from a high of 40 in Haiti to a low of 6 in Colombia. These averages, however, conceal profound inequities between social groups. Poverty, geographical distances, and cultural expectations cause adolescent, less educated, and rural women – in that order – to exhibit considerable higher than average unmet need for fertility regulation. The category most adversely affected was the one corresponding to women 15 to 19 years of age. Thus, in six of the nine countries with recent information, the percentage of unmet need among married women was higher for adolescent girls than for rural or non-educated women (Figure 7). It is also important to note that the unmet need among the non-educated women more than doubled that of their secondary-educated counterparts in most countries, with the exception of Haiti and Colombia where the gaps were not as wide;
- Access to professional care during pregnancy and, particularly, during childbirth has been shown to be dramatically affected by socioeconomic status. In Peru, for instance, the percentage of births assisted by trained personnel was 5.3 times higher among women with secondary education (69) than among non-educated women (13). Figure 8 illustrates the childbirth care gap between the most

2. These surveys have been carried out by government institutions in each country with the sponsorship of USAID (and other international organizations depending on the country), and the technical support of Macro International.

under-served categories of women (low educated and rural) and the national averages for nine countries. It is important to underscore that, as pointed out by several studies, the extent of professional assistance during childbirth is closely associated with maternal mortality levels.

Figure 7
Unmet need for family planning among currently married women
in selected categories of education, residence and age,
Latin American countries, 1990-2000

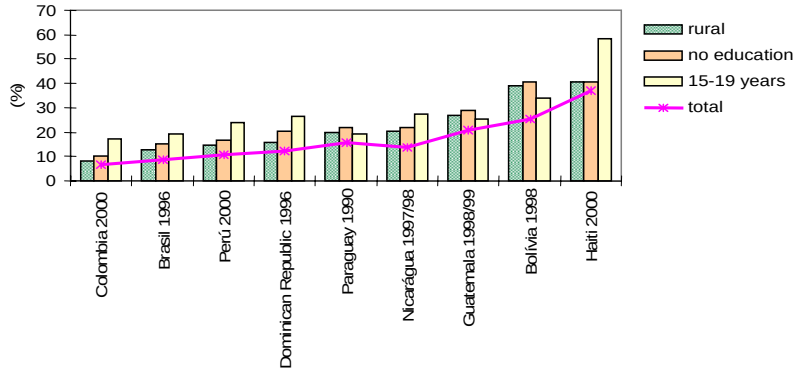
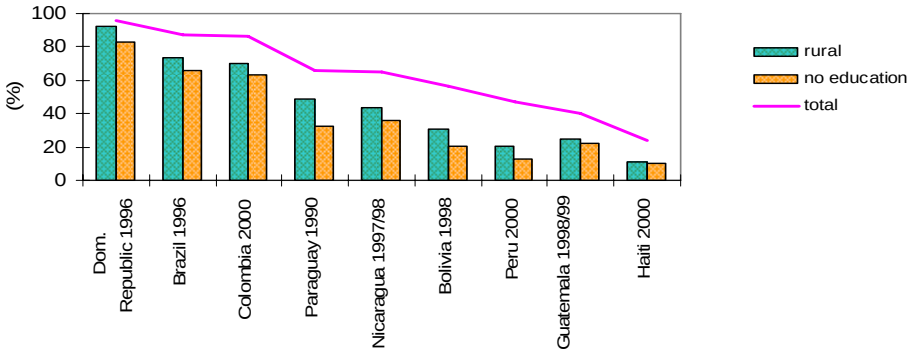


Figure 8
Percentage of births assisted by trained personnel among rural
and low educated women, selected Latin American countries, 1990-2000



Sources: Demographic and Health Surveys of respective countries, 1990-2000.

Beyond issues of access, quality of care represents a critical marker of socioeconomic, ethnic and gender inequities in health care. The discussion of this subject, however, falls outside the limits of this paper.

3.4. Gender equity in health care financing

The principle of equity in which financial contributions are based on the economic capacity of the contributor is generally violated for women, particularly in non risk-pooling health care financing systems. Women tend to pay more than men to protect their health, not only in absolute terms – given their greater need for services – but also proportionally, due to their lower economic capacity.

3.4.1. Women pay more for health care in absolute terms

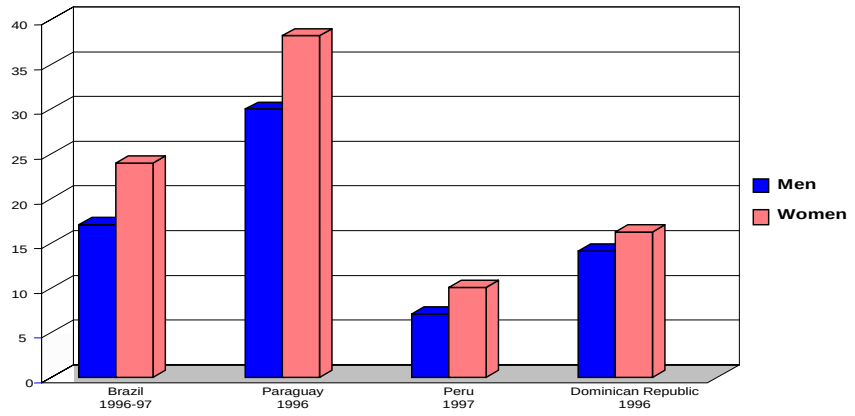
In the United States, women of childbearing age pay 68% more than men in out-of-pocket health expenditures. This higher expenditure was linked to their reproductive health needs. In fact, the spending on reproductive health services represented one third of all health expenditures by women in this age group. Such high portion was basically due to their more frequent use of services, high co-payments for obstetric care, and lack of family planning coverage by most insurance plans (Women's Research and Education Institute, 1994, p. 3).

In Chile, the private insurance premium during the reproductive years is 2.5 times higher for women than for men (see Table 1). In four Latin American countries with information from household surveys, the out-of-pocket health expenditure is 16%-40% higher for women than for men (see Figure 9).

Table 1
Private insurance premium factor, by age and sex. Chile, 1998

	Age groups				
	0-1	2-17	18-44	45-59	60+
Male	97.3	32.9	42.5	84.7	214.6
Female	82.9	33.8	92.5	130.6	42.8
Ratio F/M	0.9	1.0	2.2	1.5	0.2

Figure 9
Out-of-pocket health expenditures (in US$), by sex,
in selected Latin American countries, 1996-1997



Sources: LSMS Surveys for Brazil, Paraguay and Peru; Demographic and Health Survey (DHS) for the Dominican Republic.

3.4.2. Women pay proportionally more for health care

Women as a group are less able to pay than men. Given their prominence among unremunerated workers and their disadvantage in the remunerated job market, women have less access both to resources to pay directly for services and to insurance coverage. The characteristics of the work pattern of women that leads to a lesser economic capacity are the following:

- Greater amount of time devoted to work, if both reproductive and productive work are considered (UNDP, 1995*)*;
- Less participation in the remunerated workforce. Although the female labor share has been growing rapidly, more than 50% of women in the Region remain outside the remunerated labor market (CEPAL, 1999);
- Higher rates of unemployment among women than men almost in all countries in the Region (CEPAL, 1999);
- Concentration in poorly paid occupations and less pay for equal work. In the Americas, women's income is equivalent to 71% of

men's income on average, a figure that cannot be explained by differences in educational levels (The World Bank, 1995). The sex difference in income from wages does not correspond with the sex difference in years of education. In fact, in some countries of the Region the gender income gap increases as educational levels rise. Lower income not only limits access to need-satisfying resources, but also ability to pay for health services, and admittance to health insurance plans and to a broad service coverage within accessible plans;

- In response to the pressure to reconcile their domestic and work roles, women fill the majority of part-time jobs: 70%-90% in the Western world (The Economist, 1998) and jobs in the informal sector of the economy. Neither group is customarily covered by social security or health insurance plans;
- Pregnancy and child-rearing interrupt women's job history, making it harder to accumulate the time required to become eligible for health care coverage over the long term. This difficulty may be further exacerbated by the customary legal provisions applying to the lower retirement ages for women.

Gender equity in health care financing requires that the contributions of women and men be based on their ability to pay and not on the risks or needs of each sex at each stage of the life cycle.

A key requirement for gender equity in the financing of care is to collectively distribute *the cost of reproduction across society* instead of making women in their reproductive years bear the brunt of its cost.

3.5. Gender equity in health development work

Women represent more than 80% of the health workforce. More important, perhaps, and less valued is the fact that women are the *principal health managers and health care providers* in the family and community. In fact, more than 85% of the early detection and care of disease occurs outside the health services and is provided mostly by women in the home and community, free of charge. In addition women play a

crucial role in vaccination campaigns, in caring for the elderly, the young, the disabled, and very importantly, for the healthy.

Despite their leading contribution to health development, women remain at a *disadvantage within the formal and informal health system.*

- they predominate in the jobs with the lowest remuneration and prestige in the formal sector, even controlling for type of profession;
- they are underrepresented in the local, national, and sectoral power structures that set priorities and allocate resources for health; and
- they perform, without remuneration, most of the informal work in health promotion and health care in the family and the community.

Gender equity in health care work includes but goes beyond guaranteeing equal pay for equal work in the formal health sector.

It demands recognition and valuation of the unpaid care provided by women in the home and the community.

It requires a just distribution of the actual cost of care, not only between *men* and *women* but among the *family* or *community*, the *State*, and the *market* (UNDP, 1999, p. 82-83).

It also requires egalitarian participation by women and men – particularly in the low-income sectors – in setting priorities and allocating the public and private resources necessary for guaranteeing health.

Informal care. As the *Human Development Report 1999* points out, studies on the impact of globalization on people have concentrated on the areas of employment, income, education. Less visible, and frequently ignored, has been the analysis of the effects of these processes on informal care – that is, on the provision of care in the home to children, the sick, the elderly, and the rest of the population that needs to maintain or recover its health and energy for work. This care, known as social reproduction, is essential for economic sustainability (UNDP, 1999, p. 77).

This important UNDP report devotes an entire chapter to the topic of care, pointing out the disturbing impact that globalization is

having on this essential function. Globalization is putting a squeeze on care and caring work: (a) changes in the way that women and men use their time reduce the portion of time available for providing care; (b) fiscal pressures on the State result in cutbacks in public spending on care services; (c) the wage gap between tradable and non-tradable sectors puts an incentive squeeze on the supply of care services in the market.

Gender is a central factor in all of these impacts since, as this document reiterates, women carry the main responsibility for these activities, bear the greater burden, and receive the lowest rewards. Thus, care provided in the home is unremunerated; in the community, it is mostly volunteer work; and in the market, it receives low pay relative to its requirements for education and skills (UNDP, 1999, p. 77).

Estimates indicate that women not only work longer hours than men, but they also spend two thirds of those hours in unremunerated work (men spend only one quarter of their working hours), and most of this time is devoted to providing care (UNDP, 1995).

Historically, perhaps more than in any other sector, the health system has relied on women's traditional gender roles and unpaid work. In the past, the provision of informal care was ensured with the gender division of labor, which made care an obligation for women (and an option for men).

The dubious long-run effectiveness and sustainability of this type of system, as well as its possible collapse, have not yet been taken seriously, due largely to the very invisibility of the unremunerated work of women. In fact, with the growing participation of women in the remunerated workforce, the continued provision of this free care will not be indefinitely available. Compounding this shortage is the growing demand for care derived from two inescapable sources: the demographic trend towards aging of the population and the epidemiological transition towards predominance of chronic diseases. This foreseeable care deficit will assume greater proportions when it is considered that health sector reforms are moving toward cutbacks in public services and privatization of care.

The failure to assign economic value to women's unpaid work is behind outwardly neutral policy concepts such as "cost cutting", "reduction of the State apparatus", "decentralization" that conceal significant gender biases. These policies are gender inequitable to the extent that they imply cost transfers from the remunerated economy to the

economy based on women's unpaid work. Thus, the underlying premise of certain adjustment and reform measures is that the government can reduce costs by cutting services (decreasing, for example, hospital stays and institutional care for the elderly and the mentally ill) under the logic that these services can be provided by families. Such adjustments are based on the expectation that women are available, prepared, and morally obligated to provide home care for the dependent, sick, elderly, and disabled. Missing from these policies is any consideration of the impact that care provision expectations may have on women's employment status, remuneration, and physical and emotional health. Generally absent is also any proposal for home care support mechanisms, as well as any consideration regarding the efficiency and sustainability of this type of arrangement.

These trends indicate the urgency of explicitly confronting and justly distributing the real cost of care between *men and women*, and among the *family or community*, the *State*, and the *market***.** The key challenge for the future lies in developing incentives and rewards that ensure a supply of health care services that recognizes gender equity and the just distribution of burdens and costs among these actors (UNDP, 1999, p. 82-83).

> "Aside from looking at the state of advantages and deprivations that women and men respectively have, there is an important need to look at the contrast between (1) the efforts and sacrifices made by each, and (2) the rewards and benefits respectively enjoyed. This contrast is important for a better understanding of gender injustice in the contemporary world. The exacting nature of women's efforts and contributions, without commensurate rewards, is a particularly important subject to identify and explore." (Anand and Sen, 1995, p. 2).

In short, the reasons for the emphasis placed on women in the context of gender equity in health policy are the following:

- due to their reproductive function, women have a greater need for health services than men;
- due to their disadvantage in the labor market, women have less access to and control over the resources that determine their exercise of the right to health;
- due both to their greater need for health services and their lower economic status, women pay more than men for health care in absolute and relative terms;

- due to cultural patterns with respect to the division of labor and the value placed on their work, women are granted less remuneration, prestige, and autonomy in the formal health system, assume the unremunerated responsibility for health care in the home, and have less voice in decisions affecting the allocation of resources;
- due to their role as informal health care providers, women are more affected than men by increases or cutbacks in public services.

4. Health sector reform and its implications for gender equity and reproductive health

Health sector reforms (HSR) throughout the Region are linked to national changes driven by economic processes taking place in the world economy since the last part of the 20th century. They are usually part of a larger package of development assistance in support of health sector programs. Therefore, along with government and national institutions, they involve external multilateral actors, and exhibit common denominators associated with global processes

By the mid-1990s almost all the countries in LAC had begun or were considering the reform of their health and social security systems. As part of broad processes of State reform, these sector reforms have been characterized by three major trends: strengthening of private sources of financing, decentralization of services, and improvement of service delivery through private means.

Ideally, HSR has been conceived as

> "a process directed at introducing substantive changes into the various functions of the sector, with the purpose of increasing equity in the provision of health services, efficacy in its management, and efficiency in the satisfaction of the health needs of the population" (PAHO, 1998, p. 13).

Equity, quality, efficiency, sustainability, and social participation have been officially declared by most countries as the guiding criteria for these reforms. However, when faced with efficiency demands, equity principles have not always prevailed.

Equity concerns focus on the impact of HSR global trends that limit the ability of the State to ensure the protection of the most vulnerable and to enforce human rights. These trends refer to: the increas-

ing reliance upon the free market to provide health care; a growing influence of international institutions in determining national health policies; cutbacks in public sector spending; privatization of government functions, particularly in terms of financing health care; and the deregulation of a range of activities with a view to facilitating investment and rewarding entrepreneurial initiative. Central to all these traits are the reduction of the role of the State in economic affairs and the strengthening of the private sector role (WHO, 2002, p. 24).

From the gender perspective, one might pose the following general questions with respect to HSR:

- Does HSR help to reduce, exacerbate, or perpetuate gender inequalities in health, health care, and participation in health development work? And more specifically,
- To what extent does HSR facilitate or hinder the exercise of health rights, particularly the exercise of women's reproductive rights?

In this kind of inquiry it is essential to reiterate that, notwithstanding the presence of certain common denominators in the socioeconomic disadvantages of women, gender-based categories are not homogeneous. There are significant differences among women themselves, based on factors such as age, class, race, and nationality – differences that demand that such factors be explicitly addressed in the analyses and interventions carried out.

Some gender equity implications of the most common components of health sector reform in the Region are outlined below. Since there is considerable overlap among these categories, some topics will be mentioned in more than one component[3]. These components have been classified in the following manner:

- Definition of priorities and cost-effective interventions;
- Decentralization and promotion of social participation;
- Restructuring of human resource development and administration systems;
- Restructuring of financing systems, including private sector participation.

These policies will be discussed from the triple perspective of their contents, process, and impact. The contents are the goals and activities – e.g., decentralization, privatization of financing, targeting. The processes

3. The main elements of the discussion that follows have been adapted from the work of H. Standing, 1997.

have to do with the relationships among institutional actors and the manner in which they develop goals and activities. And impact alludes to the manner in which the institutional actors and the beneficiaries react to or are affected by such activities. From the gender perspective, the emphasis on processes and impact is fundamental, since it allows to critically examining how reform is affected and how it affects the social and economic relationships between the sexes.

4.1. Definition of priorities and cost-effective interventions

A fundamental equity concern is related to the criteria used to determine priorities and cost-effectiveness of interventions. In this regard it is essential to find out how health needs were identified in the population at large and in special groups. This means asking what needs were considered priorities, by whom, and on the basis of what criteria. It is also important to ascertain whether the models of care and the proposed "comprehensive" care packages actually include promotional, preventive, curative, and rehabilitative services, and if the care models integrate activities that were once separate.

From a gender perspective, it is essential to consider:

– *First*, to what extent the *contents* of care models and basic packages of services respond to the particular health needs and rights of women – and men –, and consider women's needs beyond those related to maternal health. Here, it is necessary to emphasize that the particular nature of these needs and rights stems not only from the biomedical dimension of reproduction, but also from group's living conditions, and gender-specific roles and relations.

A gender approach to models of care implies that, in planning the content and delivery of health services[4], consideration is given to:

4. A typical example of interventions based on such considerations would be the introduction of services to address domestic violence and obstacles to the free exercise of sexual and reproductive rights. Another example would be the organization of service delivery to take into account the constraints experienced by *certain groups of women* in terms of: information, geographical mobility, schedules, independence in decision-making about certain types of care, taboos on being examined by male professionals, and low priority assigned to their own needs versus that of their children. Revaluing women's time is vital for the promotion of equity in the health services. Traditionally these services have operated under the assumption that women's time is both free and elastic when seeking care for themselves or their children and providing follow-up care in the home. In this regard, it would be

- all stages of the life cycle;
- exposure to specific health risks and access to resources, associated with the discharge of responsibilities socially assigned to women and men;
- growing frequency with which women are called upon to perform a dual role (paid labor and domestic work);
- satisfaction of women's and men's needs derived from their biology and social milieu;
- response to women's strategic needs derived from unequal power relationships between women and men.

– *Secondly,* questions should be directed to the *processes* of identification of needs and priorities. Information is needed on the nature of data sources, the extent to which women were consulted and how much they participated in determining needs and negotiating care priorities. It is relevant to ascertain whether the government agencies in charge of women's affairs, non-governmental organizations working for gender equity, and women's organizations have intervened in these processes. It is also important to investigate what methodological *instruments* were employed in setting priorities, and what gender biases may be concealed in these instruments. The DALY (Disability Adjusted Life Years) is an instrument widely used in the Region for the purpose of calculating the burden of disease and identifying intervention priorities. This methodology has been criticized, among other reasons, for its implications for gender equity and reproductive health. On one hand, it may discriminate against some women's illnesses that often are asymptomatic and undiagnosed. But more important, due to its emphasis on mortality, disease and disability, it greatly underestimates the importance of reproductive health services that do not conform to

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necessary to investigate, for example, to what extent coordination has been achieved between maternal and child health services, and whether specific support is being provided for care in the home. Furthermore, it is important to determine whether interventions in reproductive health, domestic violence, and child growth and development are targeted exclusively to women or whether they include men in some way or another. Finally, with regard to cutbacks in certain services, it should be reiterated that reducing public spending on health may shift an excessively onerous burden onto the unremunerated reproductive economy by increasing the time women spend in providing necessary care for family members.

these negative criteria and which respond to a sizeable portion of women's health needs[5].

– *Third,* concerning the impact of policies aimed at the reorganization of the health services, mechanisms should be sought to assess the impact of the new models and benefits packages in terms of meeting the health needs of the general population and groups with special needs, including women. The participation of civil society and, in this particular case, of women's organizations, becomes crucial for this reform strategy to contribute to the achievement of equity and rights objectives.

4.2. Decentralization and promotion of social participation

Decentralization is not limited to the health sector but it cuts across other sectors. It is a strategy widely used because of its potential benefits among which there are enhanced local ownership and accountability for government programs, and increased correspondence with local needs.

Equity concerns have essentially referred to interregional inequalities in the distribution of resources. However, there has been very little concern to date about internal community processes and the vitally important problem of identifying the circumstances in which decentralized systems improve access or further marginalize underserved groups. The possible implications of decentralization for gender equity have received almost no attention.

Depending on how it is designed and implemented, decentralization may have opposite effects on women's participation at the local levels. Thus, while decentralization may constitute a window of opportunity for increasing women's participation in local power structures, it may further exclude them and their interests, and can also give rise to a disproportionate increase in the unremunerated work performed by women (Wuest, 1993).

Reproductive health services considered a priority at international and national levels may loose that rank at a local level where the role of

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5. The calculation of DALYs and their use in resource allocation have been severely criticized for their "economicist" bias and their underestimation of the burden of disease in women. For an interesting review of this criticism, see Hanson, 1999a,b).

women's rights advocates is weaker. Access to contraception – particularly by adolescent girls – emergency contraception, STD prevention, gender-based violence care, and treatment of abortion complications, may disappear altogether from the more conservative community health care settings.

The decentralization modality that involves transferring the health care financing burden from the central government to the local community can have an adverse impact on the mitigation of poverty. A strategy of this nature

> "raises the broader questions of the link with cost recovery and the use of decentralization as a tool for greater community level participation in health care delivery" (Standing, 1997, p. 7).

Community participation then becomes a means to an end rather than an exercise of democratic rights. In this context, it is important to note that the unpaid health care provided by women in families and in communities has frequently been used as a structural adjustment variable**.**

As to representativeness, it must be noted that while women are more actively involved in health activities, community "spokespersons" tend to be predominantly men who do not necessarily consult women or represent their interests. Therefore, unless mechanisms are created to actively promote and support the participation of groups traditionally excluded from the power structures – among them, indigenous populations and women – decentralization runs the risk of reinforcing preexisting local inequalities in access to power that have traditionally excluded women. This risk is compounded by the lack of development of institutionalized mediation systems that address cases of intra-community inequalities.

From a gender equity perspective it would be useful to ask the following questions:

- What kind of representation do women, particularly poor women, have in community power structures? Do they participate at the decision-making levels, that is, in priority setting, program planning, and resource allocation?
- Who gains and who loses in these decisions? What are the implications of decentralized allocation decisions for reproductive health rights?
- What are the needs for organizational support that would strengthen community decision-making structures and generate

greater participation by traditionally underrepresented groups, such as indigenous populations and women?

- What mechanisms could be implemented to increase women's participation in decision-making without increasing their workload?
- Who would, and through what mechanisms, arbitrate and redress inequitable decisions regarding internal allocation of community resources?

If a transfer of responsibility for health services from the State to the community has occurred or is going to occur,

- Does this transfer imply a greater burden for women in terms of providing home care for dependents, the sick, the elderly, and the physically and mentally disabled?
- What structures are or could be in place to support home care?
- Has the impact of this additional burden on the people who provide the care and on those who receive it been considered or investigated? What effect can this work overload have on the effectiveness and sustainability of home care?

4.3. Restructuring human resource development and administration systems

The restructuring of human resources management systems, which includes, among other elements, reductions in staffing; flexibilization of contracts; modification of remuneration, grading and evaluation systems; and redefinition of jobs, training programs, and incentive systems, has major implications for gender equity (Standing, 1997).

- Women's employment in this sector is particularly vulnerable to any significant reduction in staffing levels or in contractual stability, given the preponderance of women in certain occupations and in positions of less power;
- The experience of many developing countries suggests that women tend to use certain health services if the providers are women and, in some cases, would use them only in such circumstances. Consequently, maintaining appropriate levels of female personnel becomes a very important factor in the use of such services;
- As a result of the interaction between the formal and informal health care sectors, policies that have an impact on staffing in the

health services simultaneously affect the magnitude of the informal care burden that devolves predominantly upon women.

From the perspective of the impact on gender equity, it would be then appropriate to ask:

- What impact have the HSR human resource policies had on the composition by sex of the personnel in the various decision-making levels in the systems' public and private sectors?
- Which professions have undergone the greatest changes?
- Have these reforms had a different impact on men and women at comparable levels of occupational status, e.g., in incentives and continuing education policies?

And, turning again to the issue of interdependence between the formal and informal health sectors,

- To what extent are the staffing reductions in health services being offset by the unremunerated work of community health workers (most frequently women) and/or women in households?

4.4. Expanding options for public sector health financing and private sector participation

An equitable financing system is that in which economic capacity – not need or risk – is the parameter to determine contributions to health care financing. Progressive general taxation is the most equitable form of financing health services, while out-of-pocket payment is the most regressive and least equitable; social insurance schemes fall in between. Policies that promote regressive financing systems and privatization of health care also generate health and economic inequities, affecting most negatively those individuals and groups with less resources and higher health risks. Financial barriers to needed care can have health damaging effects, and even when care is accessible its costs may be impoverishing. In this context, the topics that have aroused the most spirited debate on equity have been cost recovery in the public sector and privatization in health care financing.

The debate has essentially revolved around the impact of these policies on the poor, and there is sufficient evidence to determine that the poor are the losers regarding access to health care services. However "the poor" is a heterogeneous category – particularly when they constitute a majority – that needs to be disaggregated to facilitate the

identification of the most vulnerable among them and the precise effects of different types of health financing modalities on these groups. Important markers of inequity in this respect are socioeconomic status, gender, age, ethnicity, rural-urban residence and marital status. Given the scarcity of this type of disaggregated information, it does not come as a surprise that the sex-differentiated impact of these new finance measures has been largely neglected, except in reference to MCH services.

From a gender equity perspective it is imperative to analyze health care financing policies in view of the differences between women and men in terms of roles, needs, access to and control of income, and intra-household distribution of resources. From this perspective it can be affirmed that, in general terms, the levying of user charges (public or private) generally takes a heavier toll from women – especially the poor – due to women's greater need for services, more limited control of income, social responsibility as principal caretakers, and increasingly frequent role of sole providers in the household.

In connection with the latter, it ought to be stressed that the cultural responsibility of women for the health care of their family members is not restricted solely to the in-kind contribution that characterizes their reproductive work. With rising frequency, it also represents monetary payments to cover medical care, particularly for their children and, increasingly, their elderly parents. This responsibility is not shared in a sizable number of cases, since, for example, the proportion of households headed by women already exceeds 30% and even 40% in Latin America and the Caribbean. The vast majority of laws that oblige fathers to contribute to the upkeep of their children are largely ineffective. Several studies have shown that contributions from absent fathers are minimal or non-existent. Mechanisms to enforce them are very limited and time-consuming for mothers (Inter-American Development Bank, 1995, p. 36).

Within this general context, more specific questions need to be asked[6]. For instance,

- Which groups suffer most from specific health care financing modes? Are women and men differently affected within those groups, and which categories of women and men are more vulnerable? (For instance, children in poor female-headed households,

6. The main elements of the discussion that follows have been adapted from the work of H. Standing, 1997.

widows, elderly men or women without close relatives, individuals with disabilities, orphaned children and adolescents.)

- What has been the impact of the various measures (community financing, exemptions, subsidies, etc.) used to mitigate the impact of these measures on the most vulnerable? How do these various measures affect access and utilization by gender?
- Who, *within a household*, gets access to health care? What *types* of services are used and *by whom*?
- How are women differentially affected by health insurance schemes tied to employment status?
- Does more spent on health, whether through preference or necessity, mean less spent on education, for instance? And which categories of individuals gain or lose?
- What is the proportion of income spent on out-of-pocket health expenditures in different groups? Does it differ by financing option and by sex? What is the proportion of women's income spent on out-of-pocket expenditures for reproductive health? Does it vary by financing option?

And, specifically, with regard to the public/private sector mix in financing health care,

- Are vulnerable groups more or less likely to be served by the private sector? Are reproductive health care needs more or less likely to be met in a mixed economy of health care?
- How are reproductive health services (family planning, prenatal care, care in childbirth, maternity leave, breast-feeding) financed? On whom do such costs fall? On governments through redistributive tax mechanisms, on employers, on donors, on other actors, or on women themselves? What reproductive health services are excluded or are totally or partially subsidized in different types of insurance plans? (In this regard the Free Maternity Law in Ecuador is particularly noteworthy; this law was modeled on the experience of Bolivia.)
- To what extent is the private sector providing preventive services and contributing to the achievement of public health objectives? This is a particular important question considering that, aside from being the main *users* of preventive services, women also absorb as *caretakers* much of the additional burden imposed by, for example, infectious diarrheal diseases in children.

- To what extent contractual frameworks are, or can be, devised with the private sector to improve equity or to counter existing or potential inequalities in provision, such as by explicitly addressing women's health needs or inequalities of access through the contracting process? Has the government established regulatory frameworks to set standards for service delivery by the private sector? Are these regulations aimed at improving equity or counteracting existing or potential inequities in services provision? Do they explicitly address the health needs of women and gender inequities with regard to access?

Within this context, it is important to emphasize that in the majority of countries, access to health insurance – and to specific services within that insurance – depends not only on income but also on being employed in the formal sector. Logically, the distribution of men and women around income and employment categories differentially affects their access to insurance. It must be noted that women's indirect access to insurance as dependents (and not subscribers) puts them – and their children – in a vulnerable position in the event of widowhood, marital separation, changes in the spouse's employment status, or changes in the regulations governing coverage for dependents. In this context it is important to note that more than 30% of households in this region are headed by women.

Given the gender division of labor, remuneration, and social benefits, it is clear that as long as social security and insurance plans remain employment-based, the majority of women will not enjoy access to health care in their own right.

5. Challenges and strategies for incorporating the gender perspective into health sector reform

5.1. Challenges

Incorporating the gender perspective into health and social security reform policies requires a response to four major challenges:[7]

7. Adaptation of the classification proposed by Standing (1998).

- Generating knowledge about gender inequalities in health and their relation to reform policies at the national and subnational levels in the Region;
- Facilitating access to this information by the pertinent stakeholders in governments and civil society;
- Promoting evidence-based advocacy to support priority interventions leading to greater equity in health;
- Supporting key stakeholders in government and civil society for developing institutional mechanisms that will permit these priorities to be incorporated and sustained into the policy management process.

5.1.1. Generation and dissemination of information

At present, the discussion of gender equity and reform is supported only by fragmentary empirical evidence and general conceptual "principles". The lack of a solid information base as a foundation for policy formulation is a particularly urgent problem when discussing the impact of the reforms. This deficiency is not limited to the gender dimension, but extends to the entire sphere of social inequalities. However, in the case of gender it is exacerbated by the scarcity of routine information in the health sector with a breakdown by sex. It is important to emphasize, nevertheless, that although the health sector does not systematically obtain or publish sex-disaggregated – except with regard to mortality – relevant health information from household surveys is available in a sizable number of countries in the Region. This information, which is currently underutilized, would facilitate the measurement and monitoring of inequalities in health, access to care, and health financing.

The first need with respect to the generation of information is the development of gender-sensitive indicators and gender inequity indicators (Anand and Sen, 1995), together with evaluation and monitoring instruments. Some of these indicators will be applicable regionally, whereas others will be context-specific. Parallel with such development, it is essential to promote and support research to document the differential impact of reforms on various social groups and on the women and men in these groups.

The information thus generated will be translated into appropriate languages for different audiences, will emphasize its relevance for hu-

man rights, and will be made easily accessible to orient political and technical decision-making, empower the civil society groups involved, and raise general awareness among the public.

5.1.2. Political advocacy and institutionalization of changes

Generating information, obviously, is not enough to produce changes in policy. Utilizing knowledge to bring about change will require the sensitization of policymakers and the strengthening of technical capacity at the planning level regarding gender issues and gender analysis. This "training" component is essential for providing the State with the technical support needed to exercise its steering role in policy development and the establishment of regulatory frameworks for private sector participation.

Even more decisive for achieving these objectives to improve gender equity in policies is bolstering the technical capacity and advocacy of civil society, particularly of organized women's groups. Experience shows that the distribution of public resources in a society reflects the distribution of power among the groups that make up this society. Political articulation and "empowerment" of the groups that work in defense of gender equity are essential for moving in the direction of a more just distribution of resources and benefits, and more importantly, for ensuring the sustainability and social control of the changes achieved.

The work program that PAHO is attempting to implement has been designed to address these challenges and promote gender equity in HSR, taking advantage of their institutional incorporation in two types of scenarios: First, the national scenarios, where it engages in technical cooperation to strengthen local capacity for the analysis, evaluation, and monitoring of HSR policies; and second, the international scenario, where the sharing of experiences and joint efforts is facilitated through promoting the production, adaptation, and application of the knowledge generated in the countries. Collaboration between countries in this effort is particularly important, because of the opportunity that it offers to evaluate various policy alternatives, learn from each other's successes and failures, and foster changes that are regional in scope.

5.2. Strategies

PAHO's basic strategy in this respect is to promote dialogue and coordinated activities among technical teams and advisory groups representing relevant sectors of government and civil society. The joint efforts of these actors revolve around diagnostic studies, identification of priorities, formulation of corrective policies, and implementation of mechanisms to monitor compliance with and impact of such policies.

In the initial stage, the activities are taking place at the regional level and in two countries, Chile and Peru, that were selected on the basis of one or more of the following criteria: a) sustained development of health and social security reform processes that facilitate impact assessment; b) national authorities' interest in integrating the gender equity perspective in the contents and processes of reform; and c) presence of an organized women's movement interested in participating in public policy-making. An extension of this initiative is planned for four countries in Central America during 2004-2005.

Activities at the regional level consist basically of the following:

- Development of basic indicators and analytical guidelines for identifying, measuring, and monitoring inequities associated with HSR, with special emphasis on gender inequities;
- Construction of a regional database on women's health and health-related sex differences;
- Coordination with other international agencies to complement and reinforce common lines of work, mobilizing financial and technical resources to achieve the proposed objectives;
- Dissemination of useful information for advocacy and planning;
- Technical and logistical coordination of multicountry activities;
- Facilitation of mechanisms for sharing knowledge and experiences among countries;
- Consolidation of research findings and recommendations for action.

The main activities at the country level consist of the following:

- Review and adaptation of regional basic indicators and development of new specific country indicators;
- Workshops on gender and health for politicians, planners, health service providers, and nongovernmental organizations;
- Establishment of cross-sectoral partnerships involving, at the very least, the ministries of health, departments of women's affairs, bu-

reaus of planning and statistics, research institutions, and organized women's groups;
- Carrying-out situation analysis and evaluation of HSR policies;
- National forums to discuss the findings of the analysis;
- Identification of needs and setting of priorities for action, with the participation of stakeholders;
- Concerted policy formulation;
- Creation of government/civil society mechanisms for monitoring compliance with policies.

6. Summary and conclusions

This paper attempted to identify, from a gender perspective, the most important equity implications of HSR in the Region. Specifically it examined the relations between health sector reforms and a) health situation and its determinants; b) access, utilization, and financing of care; and c) balance between contribution and rewards with respect to health work.

The conceptual tripod of equity, gender, and democratic participation constituted the basis for the health policy discussion, which underscored the interrelation of these three concepts. Health was presented from the human rights perspective, as a positive concept that includes both physical capacities and personal and social resources, therefore not constituting neither the exclusive province of the health sector nor limited to individual healthy lifestyles. Regarding *equity*, it was pointed out that not all differences constitute inequity and that this term is reserved to designate those differences considered avoidable and unjust. In relation to gender, it was emphasized that the focus of the gender approach is not on one of the sexes but on the *relations of inequality* between women and men. It was called attention to the fact that the guiding vision of this approach is that of an equitable society in the *distribution of the resources* and benefits of development and in the *participation* of its members in the decisions that shape that development. It was further emphasized that the meaning assigned to participation is not instrumental, but referred to the citizens' right to influence and demand accountability regarding the political processes that affect their wellbeing. It was also accented, that a gender approach

is not reductionist: it does not restrict its aim to the analysis of inequalities between women and men, but points to the systematic interaction of these inequalities, with those of class, race, age, and geographical residence.

Four types of reform policies frequently implemented in Latin America were examined from the perspective of their implications for gender equity. These policies were: (a) decentralization and promotion of social participation; (b) reorganization of services, including redefinition of care models and determination of basic service packages; (c) restructuring of the systems of development and administration of human resources; (d) restructuring of the systems of financing, including the participation of the private sector.

The analysis of these health sector reform policies highlighted the following elements:

- The conceptual bias that permeates the economic policies causing women's work to be severely undervalued: the economic contribution of their "reproductive" work is ignored and their "productive" work is underpaid;
- The importance of recognizing the interaction existing between the spheres of formal and informal provision of health care, and the unequal impact of this interaction on men and women;
- The need for understanding the different positions of women and men as producers and consumers of health goods, and the inequities ensuing from this difference;
- The sex-differentiated effects of the policies of allocation of resources, public spending, and financing of care, on the physical and economic wellbeing of society, and the distribution of its care burden;
- The implications for society's health, of gender inequalities in access to and control of resources and decision-making.

The goal of minimizing avoidable, unnecessary and unjust differences in health and its determinants encounters three main constraints: (a) lack of adequate information that permits the identification of the effects of policies and also the groups most affected; (b) preponderance of economic efficiency interests in the current health sector reforms, and absence of gender considerations in the equity debate of these reforms; (c) lack of representation of the less privileged groups, women among them, in the power structures that define priorities and allocate public and private resources for health.

For the purpose of confronting these obstacles and seeking the incorporation of the perspective of gender equity into the processes of HSR, a cross-sectoral strategy with stakeholder participation is being piloted in two countries. Its main elements are the following:

- Improvement of the availability and quality of routine information on health and its determinants, and breakdown of this information by sex, age, and socioeconomic criteria;
- Analysis of existing inequalities between men and women regarding the production and consumption of health. Emphasis is placed on differences in needs, risks, contributions, access to, and power over health resources. Groups most affected will be identified and measurement and monitoring of the impact of the different types of reforms on these groups will be assessed;
- Targeted dissemination of the knowledge thus acquired, with a view to inform policy formulation at decision-making and planning levels, "empower" stakeholders in civil society, and shape public opinion;
- Fostering active participation of the *less heard* groups in society – particularly women – so that they can have voice in the generation, planning and monitoring of solutions;
- Promotion and support of cross-sectoral institutional mechanisms that address the multiple determinants of health and inequity, and actively involve gender equity advocates from the civil society.

In short, and recognizing the importance of the achievement of objectives not only of equity but also of efficiency in the health sector, the preeminence of the ethical values of social justice and human rights is upheld. Within this context, it is further reaffirmed that the right to access and enjoy the resources that ensure health is one that the State (the public sector) directly or indirectly should guarantee. In addition, it is emphasized that this guarantee should be extended, not to a theoretical community – in terms of statistical averages – but to the real groups that form that community, and to the women and men in those groups. Finally, attention is called on the urgency to make operational the principle of equity so that it abandons the rhetoric level to be translated into policy proposals and transforming actions.

References

ANAND, S., and A. SEN (1995), *Gender Inequality in Human Development: Theories and Measurement*, New York, Human Development Report Office, Occasional Papers, no. 19.

ASHWORTH, G. (1996), *Gendered Governance: An Agenda for Change*, New York, UNDP, Gender in Development Monograph Series, no. 3.

BEALL, J. (1996), *Urban Governance. Why Gender Matters*, New York, UNDP, Gender in Development Monograph Series, no. 1.

BRAVEMAN, P. (1999), *Monitoring Equity in Health: A Policy-Oriented Approach in Low- and Middle-Income Countries*, Geneva, WHO.

CEPAL (Naciones Unidas, Comisión Económica para América Latina y el Caribe) (1999), *Panorama social de América Latina 1998*, Santiago de Chile, CEPAL.

EVANS, T., M. WHITEHEAD, F. DIDERICHSEN, A. BHUIYA, and M. WIRTH (2001), *Challenging Inequities in Health. From Ethics to Action*, New York, Oxford University Press.

EVERS, B., and M. JUÁREZ (2001), *Globalization, Health Sector Reform, Gender and Reproductive Health*, Ford Foundation, Santiago, Chile.

GILSON, L. (1998), "In defense and pursuit of equity", *Social Science and Medicine*, vol. 47, no. 12.

GÓMEZ, E. (1993), "Sex discrimination and excess female mortality in childhood", in: E. Gómez, ed., *Gender, Women and Health in the Americas*, Pan American Health Organization, Scientific Publication no. 541.

GÓMEZ, E. (2002), "Equidad, género y salud: retos para la acción", *Revista Panamericana de Salud Pública*, vol. 11, nos. 5/6.

HANSON, K. (1999a), *DALYs and Reproductive Health: Report of an Informal Consultation*, WHO/RHT/98.28, Geneva.

HANSON, K. (1999b), *Measuring up Gender, Burden of Disease and Priority Setting Techniques in the Health Sector*, Cambridge, Harvard Center for Population and Development Studies, Working Paper Series 99.12.

ICPD (1994), *Programme of Action of the United Nations International Conference on Population and Development, Cairo, Egypt*, Paragraph 7.2.

INTER-AMERICAN DEVELOPMENT BANK (1995), *Women in the Americas: Bridging the Gender Gap*, Washington, D.C., IDB.

OTTAWA CHARTER FOR HEALTH PROMOTION (1986), *First International Conference on Health Promotion*, Ottawa.

PAHO (Pan American Health Organization) (1998), *Cooperation of the Pan American Health Organization in the Health Sector Reform Processes*, Washington D.C., PAHO.

PAHO (Pan American Health Organization) (1999), *ICPD+5. Appraisal of the Implementation of the Programme of Action of the International Conference on Population and Development*, The Hague, Netherlands.

RAVINDRAN, S. (1986), *Health Implications of Sex Discrimination in Childhood. A Review Paper and an Annotated Bibliography*, Geneva, WHO, Document WHO/UNICEF/FHE 86.2.

SACHS, J. (2001), *Macroeconomics and Health: Investing in Health for Economic Development*, Report of the Commission on Macroeconomics and Health, WHO, Geneva.

STANDING, H. (1997), "Gender and equity in health sector reform programmes: A review", *Health Policy and Planning*, vol. 12, no. 1.

STANDING, H. (1998), "Reflections on gender and health reforms in the context of severe health inequalities", Paper presented at the Meeting of the Consultative Group on Gender Equity and Reform, Washington, D.C., PAHO/HDW.

The Economist. A Survey of Women and Work, 1998.

THE WORLD BANK (1993), *World Development Report 1993,* Washington D.C., Oxford University Press.

THE WORLD BANK (1995), *Workers in an Integrating World: World Development Indicators. World Development Report 1995,* Washington, D.C.

UNDP (United Nations Development Program) (1995), *Human Development Report 1995*, New York, Oxford University Press.

UNDP (United Nations Development Program) (1999), *Human Development Report 1999*, New York, Oxford University Press.

VEGA, J., *et al.* (2001), *Equidad de género y acceso a servicios de salud* (Unpublished research report), Washington, D.C., PAHO/WHD.

VERBRUGGE, L. M. (1990), "Pathways in health and death", in: R. Apple, ed., *Women, Health and Medicine in America*, New York, Garland Publishing.

WAGSTAFF, A., and E. VAN DOORSLAER (1993), "Equity in the finance and delivery of health care: Concepts and definitions", in: E. Van Doorslaer, A. Wagstaff, and F. Rutten (eds.), *Equity in the Finance and Delivery of Health Care. An International Perspective*, Commission of the European Communities, HSR Series no. 8, Oxford, Oxford University Press.

WHITEHEAD, M. (1990), *The Concepts and Principles of Equity and Health*, Document EUR/ICP/RPD/414, WHO Office for Europe, Copenhagen.

WHO (World Health Organization) (1999), *DALYs and Reproductive Health: Report of an Informal Consultation*, WHO/RHT/98.28, Geneva.

WHO (World Health Organization) (2001), *World Health Report, 2001*, Geneva, WHO.

WHO (World Health Organization) (2002), *25 Questions and Answers on Health and Human Rights*, Geneva, WHO.

WOMEN'S RESEARCH AND EDUCATION INSTITUTE (1994), *Women's Health Care Costs and Experiences*, Washington DC, WREI.

WUEST, J. (1993), *Institutionalizing Women's Oppression: The Inherent Risk in Health Policy That Fosters Community Participation*, Health Care for Women International.

14

AN ANTI-POVERTY PROGRAM AND REPRODUCTIVE HEALTH NEEDS IN MEXICO'S INDIGENOUS POPULATION: CONTRASTING EVALUATIONS

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1. Public policies for the poor: Approaches to evaluating their impact

The struggle against poverty and for reproductive health have been intimately tied-up in Mexico's government programs since family planning became a part of the public health establishment in the second half of the nineteen-seventies.[2] In the 90's the integration of both fields of

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2. Mexico's Social Security Institute (IMSS) was the institution which developed the first program to aid regions that were designated "marginal" at the beginning of the 70's, and later referred to as "in extreme poverty". This program was called *Coordinación General del Plan Nacional de Zonas Deprimidas y Grupos Marginados* (COPLAMAR, National Coordination for Depressed Areas and Marginal Groups). Since 1977 the IMSS has had a leading role in family planning, in charge of serving 57% of new contraceptive users for the period 1977-1982. In May 1979 an agreement was signed between IMSS-COPLAMAR for the promotion of primary health care and

intervention became part of the general guidelines of the World Bank, which promotes and finances programs with this orientation in many countries.[3] There are many possible bases on which to evaluate these programs (cost/benefit analysis, consumer satisfaction with services, quality of services, accomplishment of goals over time, etc.), and in this paper I review the main ones applied to Progresa, the Program for Education, Health and Nutrition, Mexico's most important anti-poverty program, which has a very strong reproductive health component.

Actually, the most comprehensive reproductive health interventions for the poor undertaken by the Mexican government are carried out by Progresa, re-baptized "*Oportunidades*" under the present administration, 2000-2006. This might be a good enough reason to review the main results of studies which evaluate its impact, but beyond the detailed analysis of these results in and of themselves, I am interested in the unmet needs and problems reported in various studies which take into account the perspective of the beneficiary population and health service providers. This review, I hope, will show the importance of analyzing the effect of such programs on social relations and gender relations in particular, as gender equity is an often-emphasized goal of the official discourse on anti-poverty and reproductive health (Progresa, 2000*a-e*). This is so because research done world-wide has shown the various and complex ways in which gender relations have decisive consequences for reproductive health outcomes and the success of public programs (World Bank, 1995, 2001*a*).

Progresa was designed by the World Bank in collaboration with Mexican experts, relying on a long history of previous experience in Mexico's public health institutions and anti-poverty programs (Yaschine, 1999).[4] Since its start, at the end of 1997, Progresa has had funds specially

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family planning in rural and marginal areas, through the creation between 1979 and 1986 of 71 rural hospitals and 3,000 new medical posts to attend them. During 1979-1983, the IMSS trained 14,635 rural midwives, who were in charge of around one third of the family planning services provided by the IMSS in rural regions (Zavala de Cosío, 1992, p. 224-225).

3. The program which I present in this paper is in the process of being adopted in several countries, such as Argentina, Colombia, Honduras, and Nicaragua (Progresa, 1999).

4. Yaschine (1999) considers Mexico "an interesting case study because the government has been implementing anti-poverty programmes since the early 70's

budgeted for evaluating its performance. In March 2002 it changed its name to "*Oportunidades*", but since I will be reviewing evaluations done during the period between 1997 and 2000, I will address it by its original name.[5]

Several government-funded evaluations have looked at the program's impact on nutrition, education, health, community, work, and intra-family relations (Progresa 2000*a-e*). The techniques employed by these studies were diverse. On the one hand, a quantitative approach was applied to the analysis of the expansion of services delivered, as well as the cost/benefit of such services. On the other hand, government-sponsored and independent studies were undertaken to collect the points of view of program beneficiaries and health providers. A strong contrast between these approaches emerges from this overview. Government-financed studies tend to be more "optimistic" with regards to Progresa's achievements than independent studies, which are much more critical and point to what is still missing in the Program – that is to say, they underline the needs that remain to be fulfilled. These are the disparities which I want to address in this article.

(longer than many other developing countries)." She asserts that the anti-poverty policy guidelines "are the result of the confluence of ideology between the actors dictating the international trend and the technocratic political elite that has ruled Mexico since 1982." (p. 58). Santiago Levy is an outstanding representative of this technocratic elite, "credited for being the intellect behind the design of Progresa and of much of the restructuring of this administration's [president Zedillo's 1994-2000] social policy. Working for the World Bank, he produced a report in 1991 entitled "Poverty Alleviation in Mexico" which contains the basis for Progresa." (p. 55). Yaschine describes the main changes in Mexico's anti-poverty agenda since the 80's thus:

> "…the reduction of public investment from almost 11% of GDP in 1982 to almost 5% in 1989 was the initial factor leading to a drastic change of the social policy model… The education and health sectors were disproportionately hit, suffering reductions of 30% and 23% respectively… Initiatives directed at the poor were especially hard hit, such as basic education and health programmes within COPLAMAR and other rural and regional development programmes… Universal subsidies were substituted by targeted ones in order to maintain coherence with the new fiscal situation and the ideological approach guiding the economic model." (Yaschine, 1999, p. 48)

5. At present there are other government health programs aimed specifically at Mexico's Indian population, such as *Arranque Parejo en la Vida* and the Health and Nutrition Program for Indian Peoples (*Programa de Salud y Nutrición para los Pueblos Indígenas*) of the Health Ministry (*Secretaría de Salud*); but they are very recent and no studies about them have yet been made public.

As an anthropologist, my approach is holistic, thinking of reproductive health (RH) as the result of many interrelated dimensions: political, economic, social, and cultural. My particular interest lies in the social relations involved in the application of public policies, because these are crucial to the impact that RH programs have. This implies taking into account not only the Program's immediate impact on RH, but also those aspects of local life that are involved in and affected by it, particularly community and gender relations. Looking into these dimensions inevitably obliges us to go beyond the government's usually glorified image of the results achieved by its programs, measured mostly in increased coverage of services, and introduces such problematic aspects as insufficiency of services, the quality of services delivered, and unexpected negative side-effects.

I am particularly interested in the Indian population because cultural and ethnic dimensions add complexity to the problem of attempting to address inequality. Additionally, the indigenous population is the sector of the poor with the worse living and reproductive health conditions, due to historical and on-going discrimination and marginalization from public services – most notably health and education.[6] For a public program to be successful in Indian communities, one must not only take into account the magnitude of the resources involved in dealing with extreme poverty, but institutions must also understand and acknowledge cultural differences and the specificity of social relations. Otherwise, the result is unexpected negative side-effects, which local actors reveal when they express their own priorities and those needs that they feel are unmet.

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6. Discrimination has been a taboo subject in Mexican academic research. At the beginning of the 90's, Lozano *et al.* (1993) conducted the most comprehensive research to date on inequality in the distribution of health resources in Mexico and the relationship between poverty, lack of access to institutional resources, and health outcomes. Unfortunately, this study does not take ethnicity into consideration. Sepúlveda (1993) and Boltvinik (2001, 2003*a,b*) are among the very few that have begun to address this matter. For an excellent critical review of the relationship between the Mexican state and the Indian population in recent times, see Oehmichen (2000).

2. The beneficiaries of the Program

Progresa/Oportunidades aims at "the poorest among the poor", which consists of the rural and Indian population. Around one quarter of Mexico's one hundred million inhabitants live in rural settings, and almost 10% of the total national population is Indian. The 90's were characterized by strong rural-urban migrations, and by the year 2000 40% of Indians were living in Mexican cities or had migrated to the United States. Nonetheless, the majority still live as small producers of agricultural goods, for family consumption and for sale, in dispersed hamlets of less than 2,500 inhabitants.[7] It is one of the sectors of the Mexican population which has suffered the worst consequences of neo-liberal economic policies, particularly the North American Free Trade Agreement (NAFTA). NAFTA caused a decline in the price of small-scale agricultural products and the government cuts in the credit, subsidies, and technical assistance it used to provide as part of its "Welfare State" policies.

Various techniques for measuring poverty have been used in Mexico, with differing results according to the definitions and procedures applied. But in spite of the differences, all researchers agree that income distribution has become more unequal in the 90's and that the number of people living below the poverty line has tended to expand both proportionally and in absolute terms (Tuirán, 2001; Boltvinik, 2003*c*). Regarding the Indian population in particular, it should be noted that between 1990 and 1995 the number of municipalities in conditions of very high marginality and which had 30% or more Indian population increased by almost one third (Jurado *et al.*, 2001).[8] The totality of the Indian rural population lives below the poverty line and in worse living conditions than the non-Indian population living in the

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7. According to the National Census of 2000, in that year 55.6% of the Indian population lived in settlements with less than 2,500 inhabitants, which officially qualifies these localities as rural. Almost 21% lived in localities having between 2,500 and less than 15,000 inhabitants, 8% in cities with populations between 15,000 and 99,999, 8% in cities with populations between 100,000 and 499,999, and 7.4% in cities of 500,000 and more. Living conditions improve for both the Indian and non-Indian poor in urban settings (Boltvinik, 2003*a*, p. 22).

8. Jurado *et al.* used the information provided by the Consejo Nacional de Población (CONAPO*), Indicadores socioeconómicos e índice de marginación municipal, 1993,* 1995.

same rural contexts.[9] According to the National Census for 2000, almost half of Indian homes did not have running water, while the figure was 30% for rural non-Indian homes and 5% for urban homes; 70% of Indian homes had no sewage, whereas the figure was 55.5% for rural non-Indian homes and 7.2% for urban homes (Boltvinik, 2001, p. 28).[10] Inequalities in the distribution of health services are similarly enormous:

> "In 1998, in the southern states of Chiapas, Hidalgo, and Oaxaca [which have a high proportion of Indian population], there was one physician for every 1,150 people, while the northern states [more urban and with small Indian populations] had one for every 625 people. Differences within states are even more severe. For example, in Chiapas [one of the states with the highest proportion of Indian population], the five municipalities with the lowest levels of marginality, that is, with better standards of living, had one physician for every 557 inhabitants, whereas municipalities with indigenous populations had one physician for every 3,246 people… Life expectancy stands at 55 years in rural areas compared with 71 years in urban areas." (World Bank, 2001*b*, p. 419)

One of the goals of the policy of de-centralizing public health services in Mexico, which began in 1983, is to contribute to the redistribution of resources, with the purpose of overcoming inequalities between urban and rural areas. But Nigenda's (2001) case study, dealing with the impact of decentralization on the reproductive health programs of four states, shows that at least in the states studied there has been no substantial improvement in the urban/rural gap.

The health infrastructure continues to be insufficient or non-existent in regions where the population lives in widely-dispersed hamlets with bad roads and poor communications. Here the greatest problem is access, together with deficiencies in medical instruments, medicines, and the training of personnel. One of the main problems with Progresa is that it services only those communities with easy access to pre-existing educa-

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9. Inequalities in income between the Indian and non-Indian populations are quite marked. According to the 2000 Census, 99.4% of the Indian population living in rural areas lived below the poverty line; 94.1% qualified as "extremely poor" and 5.3% as "not extremely poor". Figures for the non-Indian rural population were 98%, 81.1% and 16.9%, respectively (Boltvinik, 2003*a*, p. 22).

10. The data for rural non-Indian and urban homes corresponds to the *Conteo de Población y Vivienda 1995*.

tional and health facilities. The population living far away from these facilities does not benefit from Progresa, in spite of the fact that it has severe needs.

There is a notorious lack of systematic and specific information on health and reproductive health conditions in Indian regions. The scarce information available reveals an appalling situation. For municipalities with a majority Indian population, malnutrition,[11] anemia, and intestinal and respiratory infections are among the five first most common causes of death, even for adults, while the first five causes of death among the national population are all noninfectious. Indigenous municipalities have triple the national average of incidence of deaths from intestinal infections. They suffer from at least three times more maternal deaths, and these statistics are under-reported (Freyermuth, 2002, p. 31).

3. Progresa: The Program for Education, Health and Nutrition

Progresa/Oportunidades has been the main government program for "alleviating" or "combating" poverty in Mexico since 1997. It was based on the pre-existing public health infrastructure, which was reorganized and given a new orientation to extend the coverage of its basic package of health services. By the end of 1997 it was under way in 12,000 localities, providing benefits to 400,000 families. By the year 2000 it covered 50,000 rural localities and 2.6 million families, which is to say around 14% of Mexico's total population, and around 40% of the rural population (World Bank, 2001*b*, p. 587). In 2000 it had a 960 million dollar budget. It gives money to the extremely poor so that they can spend it on education, food and health. The aim is to develop human capital, under the philosophy that strengthening the capacities of individuals will help significantly improve their living conditions and promote their contribu-

11. The National Nutrition Survey for Rural Areas (ENAL 96) showed that the states with larger Indian populations were the ones which suffered from the highest levels of malnutrition. According to the size/age indicator, 51% of the children living in non-Indian communities were malnourished; the proportion is 59.5% in the case of children living in communities with a widely-dispersed Indian population, and 73.6% in the case of children belonging to communities with a high density of Indian population (INI, 2000, vol. 1, p. 282).

tion to national development. It expects to produce sustained changes in the short run, while at the same time cutting down the inter-generational continuity of poverty (Progresa, 2000*b*).

Progresa involves several government institutions, including the Health, Education, and Development Ministries, as well as the Social Security Institute. The Program has a complex system of targeting individual families to give them regular cash subsidies. The subsidies are turned over to women, both with the idea that this will help empower them and because they are considered to be better administrators than men. Women tend to invest all incomes in family needs, whereas men sometimes use part of those incomes in personal consumption (notably alcohol). Subsidies are provided in two ways: a) as scholarships so that children can complete primary and secondary school; b) as cash to buy food. The amount of money given as scholarships for girls is higher than that given for boys, to ensure that they graduate.

Monetary aid is conditioned on the mothers' participation in the following three activities, to promote family health and nutrition:

1) Administering nutritional supplements to children aged 0-2, and from 2 to 5 if they suffer from malnutrition. Pregnant or breast-feeding women also are given supplements.
2) Attending periodic medical checks for those members of the family considered most vulnerable: pregnant and lactating women and children under five (to control their weight and size, administer vaccines, etc.).
3) Attending a program of monthly talks on hygiene, family health, and food preparation, to reinforce prevention (Progresa, 2000*a*, p. 8-9).

If mothers don't comply with these requirements, the economic aid is withdrawn.

The maximum amount that a family could get during the January-June semester of the year 2000 was $790 per month (less than 80 dollars) if it had several children in school; the average amount given was around $250 (30 dollars) per month per family. This amount was considered too high by the World Bank, given that:

> "international experience suggests that amounts below the current salaries for children are sufficient to keep them in school because parents value school for altruistic reasons or because they expect benefits in the future" (World Bank, 2001*b*, p. 589).

According to a study done in a community in Oaxaca, the Progresa subsidy for food represents between one quarter and 35% of the monthly average expenditure in food by the majority of domestic units (Sesia, 2001, p. 118). This means that families come to rely on the subsidies as a very important component of their livelihood. As we shall see, this puts a high degree of pressure on mothers to adequately carry out the activities designed for them by the Program.

The health component of Progresa is carried out by the Health Ministry and the Social Security Institute (IMSS-Solidaridad, called IMSS-Oportunidades since 2002), which coordinate their work together with Conprogresa, the part of the Social Development Ministry (SEDESOL) in charge of implementing the program's objectives. Each medical unit of the Health Ministry has between 100 and 500 families under its responsibility (an average of 3,000 inhabitants), while the Social Security teams serve around 5,000 inhabitants of the town or village where they are established, plus three more localities. The IMSS-Solidaridad also has Mobile Units which look after between 5,000 and 7,000 inhabitants (Progresa, 1999). Progresa provides a Basic Package of Health Services consisting of 12 to 15 interventions, classified under three main headings:

1) *Promotion activities*, such as building basic sanitary facilities for families and delivering community talks about self-care in health, nutrition and hygiene.
2) *Prevention*, consisting of the following services: family planning; prevention and control of tuberculosis, high blood pressure, diabetes, and accidents; early diagnosis of cervical-uterine cancer; monitoring child nutrition and growth; and a vaccination plan.
3) *Delivery of health and rehabilitation services*, for individuals, families and the community. Pre- and post-natal care for mother and child, as well as care during childbirth. Treatment of diarrhea, acute respiratory infections, parasitic infections, and cholera.

Thus, the reproductive health component consists of family planning (information on and supply of contraceptive methods), pre- and post-natal care, child delivery, and cervical-uterine cancer detection. Up to the year 2000 the package did not address Sexually Transmitted Diseases (STDs).

4. Quantitative evaluations of the Program's impact

The evaluation of the Program is an on-going process which began in 1998 and is expected to continue, with the purpose of making corrections and adjustments. Furthermore, evaluations are supposed to be an indispensable part of social policy-making. Progresa has been evaluated by various actors: 1) The Program has contracted independent academics (researchers belonging to the Center for Research and Higher Studies in Social Anthropology, CIESAS, Mexico), the International Food Policy Research Institute (IFPRI, Washington), and other institutions. 2) Its own personnel, under the guidance of the IFPRI, have performed evaluations. 3) Independent women's NGOs have done studies of Progresa's impact. The sources of information have been the administrative registers of the Program, the Programs' periodic surveys, individual interviews, and focus group discussions.

Evaluations contracted by the program and using the program's surveys as a source of information,[12] show several fundamental achievements for the period 1998-2000: 1) There has been an increase in schooling and permanency in primary and secondary school, especially for girls (the female enrollment rate in secondary-level schools has increased by 21%). Overall, school attendance increased by one year. 2) The use of public health services has increased by 18% since the program began. 3) The diagnosis of cervical-uterine cancer has also gone up significantly. 4) Children aged 0-5 of participating families had a 12% reduction in their morbidity rate, compared to children belonging to non-participating families; and morbidity among children between ages 0-2 diminished by 22%. According to World Bank analysts, "These results alone would make the program cost-effective" (World Bank, 2001*b*, p. 587).

Communities where the Program began in 1998 were compared with those where Progresa started two years later, which served as a control

12. The Surveys are the *Encuestas de Evaluación de los Hogares (ENCEL) de Progresa.* Before the Program began, in March 1998, 505 of the 50,000 localities where it was going to operate were assigned to two groups: one was to begin receiving aid immediately, and the other, with the same socioeconomic characteristics, was to serve as a control group, being incorporated into the Program two years later, in 2000. Information was collected prior to the initiation of the Program, in 24,000 homes, corresponding to almost 125,000 individuals. Four surveys were given every six months to the same homes during the following two years (Gertler, 2000, p. 3).

group. According to their responses to the health survey questionnaires, adults aged 18-50 and living in localities in which the Program operated, had a calculated decrease of 19% less days where they had difficulty performing daily activities due to sickness; they reported that they were able to walk 7.5% more than before the Program started without feeling tired, and it was calculated that they spent 22% less days in bed, as compared to individuals living in the control communities. Also, the number of hospitalizations diminished (Gertler, 2000, p. 3-4).

With regard to the impact of family planning education, 88.6% of women beneficiaries (married or in union, 20-49 years of age) reported knowing at least one contraceptive method, by comparison with 84.5% of the non-beneficiaries (who also belong to homes in extreme poverty). Around 6% more beneficiaries than non-beneficiaries knew of methods such as the Intrauterine Device and sterilization, which are the ones most offered by the public health institutions. Nonetheless, the proportion of beneficiaries and non-beneficiaries of equivalent age groups who do not want another pregnancy is practically the same.

In May 2000, 45.4% of beneficiaries aged 20-49 were using a contraceptive method, whereas the proportion of non-beneficiaries was 42.7%. Although the difference between beneficiaries and non-beneficiaries might seem small, it was considered significant by Progresa evaluators. For both beneficiaries and non-beneficiaries the most used methods are sterilizations (around 45% of all contraceptive users) and IUD (24.4% of beneficiaries who use contraceptives and 19.8% of women in the control group who use contraceptives). 92% of all contraceptive users obtained them from a public health institution. Rural women are the ones with the highest fertility levels in Mexico and the main reasons they give for not using contraceptives is the opposition of their husbands and that they themselves do not favor their use. This negative attitude towards contraception is apparently in the process of changing among younger women. The unsatisfied demand for contraceptives is calculated to be around 30% in rural areas (Huerta and Hernández, 2000, p. 48-57).

With regard to prenatal care, the proportion of Progresa beneficiaries who went for medical checks increased from 84 to 89%, whereas in the control group the proportion was 84.4% in 1998, and 85.5% in 2000. The women with the highest parity, including Indian women, are the ones who have the least probability of using this service. In the case of Indian

women, researchers think that difficulties in the relationship with public health providers are not the explanation, because Indian mothers take their children for check-ups in a higher proportion than non-Indian poor women.

Concerning breast-feeding, the results of the evaluations show that the introduction of the Programs' nutritional supplements for infants aged 0-2 have not diminished this practice. Before and after the initiation of the Program, 90% of children of mothers in extreme poverty in both beneficiary and non-beneficiary communities, were breast-fed at least until they were nine months old. Also, the proportion of children aged 0-2 who were taken by their mothers for monitoring of their growth, increased 6% more in the beneficiary population (Huerta and Hernández, 2000, p. 58-66).

Considering that the Program was only two years old when it was evaluated, the changes just mentioned were seen as proof of improvement due the Program's preventive interventions and routine medical controls, as well as its impact on the beneficiaries' diets.

5. The experience of women beneficiaries

There are several studies done with women, interviewed individually and in focus groups, in which they were able to talk about the problems they have encountered as beneficiaries of the Program. I have organized the main findings of these studies under six topics, which I discuss here.

5.1. Insufficiency of services due to inadequate infrastructure, material and human resources

One of Progresa's main objectives is to expand the coverage given by already existing educational and health infrastructure. As new localities were incorporated into the program, new beneficiaries began to participate in the system of scheduled medical consultations. Given that no new investments were made into infrastructure and equipment, it is not surprising that several of the studies done with program participants have recorded their observations that the pre-existing institutional capacity was unable to guarantee adequate delivery of services. This happened, for example, with the Program for the Detection of Cervical and Uterine Cancer. This program origi-

nally was not part of Progresa's Basic Health Package, but was included due to the insistence of women's NGOs. In 1999, Pap tests became mandatory for women whose families received Progresa benefits. But due to lack of equipment, visual explorations, rather than vaginal cytology, are the standard diagnostic tool in many localities, in violation of the Official Norm for this type of tests. Also, labs have insufficient capacity to process those samples that are actually taken, and there have been long delays in returning results. A study with women who had the Pap test taken found that, for lack of adequate information, many thought that the Pap smear in itself prevents cancer, while others thought that if no results arrived it meant that they were fine, when in truth their sample had often not been analyzed. Eventually thousands of samples did get processed and hundreds of cases were diagnosed; then the next problem was that many of the women who were told that they had cancer, for various reasons could not access treatment (Castañeda, 1999, p. 38). Evidently, extending diagnostic procedures is a very important step, but it does not necessarily mean that prevention has improved; nonetheless, the two concepts tend to be confused in Progresa documents, as we shall see later on.

5.2. The targeting of subsidies to individual families creates community divisions

The way the Program is targeted creates problems. To begin with, the poorest and neediest communities are left out of Progresa, because they do not have ready access to pre-existing medical and educational institutions. Then, once a community is selected, subsidies are targeted to individual families. This is one of the main complaints that people have, as they perceive that the community as a whole is poor and that differences are not so large as to justify the exclusion of some families. Studies done by Adato *et al.* (2000*a,b*) and Nahmad *et al.* (1998) interviewing beneficiaries and local authorities, revealed that the uneven distribution of aid creates much resentment.

Since colonial times, collective dynamics have provided a crucial survival strategy for rural Mexican communities, helping them make the most out of scarce resources. Throughout the second half of the twentieth century, and in response to Welfare State programs, communities have decided through local assemblies how they will use gov-

ernment aid, for common purposes. With this background, it is not surprising that in the two communities of Oaxaca where she did field work, Sesia (2001) found that people did not accept passively those aspects of the Program which they found divisive, but rather devised ways of adapting them to their own interests and outlooks. For instance, scholarships assigned individually by Progresa/*Niños en Solidaridad* (Children in Solidarity), were transferred by beneficiary parents to local authorities, so that they could buy school materials and distribute them among all the children. Another example is that although Progresa has clear prescriptions for targeting food supplements to pregnant and lactating women, as well as to children under two years of age or with malnutrition, mothers always distribute all supplements, including their own, equally among all of their children. A third example is that, whereas the Program requires that the community appoint local supervisors to make sure that the aid is used exclusively for the planned purposes, supervisors don't really go around policing their neighbors, since there is a strong opposition towards this type of control (Sesia, 2001, p. 125).[13] Sesia underlines the fact that these examples clearly prove the local capacity for transforming a government program so that aid, which was designed to be given according to an individual logic, is in fact distributed according to the traditional collective and family logic.

5.3. Services are not free any more

For communities in extreme poverty, government services have always been free, and Progresa is supposed to be so. But now that families are given money, beneficiaries are asked by the personnel at the government clinics to pay fees that are called "voluntary contributions" to buy detergent, disinfectants and minor medical materials that are scarce. To keep their subsidies, women also have to spend time cleaning the clinics and performing other public hygiene activities (Castañeda, 2001, p. 4-5).

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13. It must be pointed out that this varies from one community to another. Members of other communities belonging to Oaxaca and other regions of the country have reported that some supervisors are using their position to build up clientelistic relationships, based on the fear that they will produce negative reports, which can mean that aid may be withdrawn.

5.4. Contradictory effects

Progresa hands the aid money to mothers under the assumption that this will empower them. At the same time, the program makes them responsible for the use the money is put to. One guiding principle is that the support received requires the co-responsibility of the beneficiaries. To continue receiving aid they have to participate in a series of periodic activities:

1) Once a month, participating mothers must attend talks given by medical personnel about health, nutrition, and hygiene so that they can detect and prevent health problems in other members of the household.
2) Mothers must also take their children to regular medical checks.

Continuing aid is also contingent upon the following set of *unofficial* requirements:

3) Many mothers have to travel to collect the aid given by the Program and then wait to cash it in. There have been complaints that traveling in itself means spending an important part of the funds.
4) They often have to clean and perform other tasks for the Health Center and for the schools their children attend.
5) The Program also relies on another form of unpaid female labor, which is the work done by Community Health Promoters (which are usually women). Acoording to Castañeda's calculations, promoters do an average of 29 hours of free service per month.

Clearly, in spite of its discourse on gender equity and women's empowerment, Progresa is conserving the traditional division of labor, in which women are the sole care-takers of the family's health. Furthermore, under Progresa they are also made responsible for part of their communities' health. Their workload is thus increased. Both facts did not escape the attention of many of the women who participated in Adato's focal groups (2000*a,b*). These women emphasized that they should not be the only ones responsible for family and community health, and that talks should also be given to men. They find that they do not have enough time to cope with all their responsibilities, which usually include participating in agricultural production and generating whatever extra incomes they can.

In addition, women receiving economic support feel compelled to comply with the program's rules. If they don't observe the schedule of activities planned for them, the support is withdrawn. Castañeda's 2001 study[14] explores the pressures felt by the female beneficiaries, and finds that a high number reported suffering from insomnia and "*nervios*" as a result of the fear that they would not be able to live up to all of the Program's requirements and would lose the much-needed economic support. The pressures felt by these women may even be impinging on their reproductive rights: 14% of the women interviewed reported that they had agreed to being sterilized in order to keep Progresa's aid. Cases of conditioning of aid to the acceptance of sterilization or the implant of Intrauterine Devices have also been reported by Indian women participating in Reproductive Health forums (Memorias, 1999; Grupo, 2002).

On the other hand, participating in health talks may provide the women with the opportunity to interact in a public space, which could be important to the effort of building up their self-esteem and self-confidence as part of the process of empowerment. Yet Castañeda's study (1999) shows that, up to now, limited progress has been accomplished in this respect, since only 42% of the 309 women interviewed who attended the Progresa monthly meetings reported having talked to other participants, and only 36% had talked with others about their problems. This is because the so-called "*capacitaciones*" (workshops) are in fact lectures and are not open or conducive to dialogue.

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14. Castañeda led two studies which I use here: the first one (Castañeda, 1999) was aimed at the perceptions of the beneficiaries of the Program for the Extension of Coverage on community participation and the way in which the gender perspective is incorporated into the Program's actions. Male and female beneficiaries were interviewed in two Indian municipalities in extreme poverty, one located in Oaxaca's Isthmus region (Ayuuk or Mixe-speaking) and the other in the northern part of the state (Mazatec-speaking). The second study (Castañeda, 2001; Red, 2000) was meant to evaluate: 1) whether Progresa's goals were fulfilled, 2) whether the Program was able to improve the female beneficiaries' social position, and 3) what alterations the Program underwent in the field. 309 women beneficiaries belonging to a local NGO were interviewed in Indian municipalities belonging to eight states (Campeche, Chiapas, Guanajuato, Jalisco, Oaxaca, Puebla, Quintana Roo and Yucatán), as well as 129 non-beneficiaries, 27 health promoters, 19 teachers, 15 employees of health centers, 13 local authorities, and 13 persons representing social organizations.

5.5. Lack of adaptation to local culture and human resources

The information derived from women beneficiaries emphasizes several important areas in which Progresa shows a lack of adaptation to local characteristics and needs. One has to do with the monthly medical talks themselves. In the original design, 25 different topics were supposed to be taught. But the women interviewed by Castañeda (1999) say that, except for family planning, the contents of the talks are always the same and have been repeated since they can remember: the emphasis is on boiling water to prevent infections, washing hands, building latrines, etc., all of which depend upon the availability of water, fuel and so forth. The scarcity and cost of these resources, rather than a lack of good will, are the reasons that the proposed measures do not become practice. Interviewees also point out that health talks are usually given in Spanish, a language not well understood by most Indian women. Studies such as Castañeda and Lerín (1999) and Cao (1998) have found similar difficulties in communication between the health personnel and the midwives who attend talks and workshops designed to improve their skills. The interviews highlight the fact that the women are dissatisfied both with the content of the talks and with the manner of communication. This information shows that programs such as Progresa should make a major effort to take local circumstances into account and to improve communication with the population they serve.

In spite of an institutional discourse which emphasizes respect for local culture, the medical personnel which works in the Program has not received specific training that would permit better understanding of, and interaction with, Indian patients. This has been a persistent complaint in Indian women's forums, and specialists (medical anthropologists in particular) have consistently demanded that cultural competence be part of personnel training (Grupo, 2002, p. 23; Aguirre Beltrán, 1980). This is still a very important unmet need.

Of equal relevance for reproductive health is the interaction between government programs like Progresa and midwives, given that in the majority of Indian communities midwives play a prominent role not only in childbirth but also in pre- and post-natal care. But although government programs for training midwives have existed for more than two decades

(Parra, 1991), there are persistent problems in the relationship between Indian midwives and public health institutions and personnel.

In a meeting organized by a women's NGO (Grupo, 2002), around 50 midwives, representing their colleagues from several regions, talked about the lack of government recognition and support for the work they do. They complained that they are blamed for maternal deaths, as if malnutrition and a context of poverty, violence, and lack of basic services had nothing to do with these deaths. This blame of course does not appear in the official records, which are usually politically correct and uphold the idea that traditional medicine and biomedicine should play complementary roles. But actual practice is very distant from discourse. Midwives stressed that they are not given the full government support they need to do their specific work to their satisfaction. They are poorly subsidized or not subsidized at all and find it difficult to transport their patients to clinics when they realize that a birth will be complicated. Yet they are sought by Progresa to help lead other women in sanitation campaigns. The added responsibility which this implies might be diverting midwives from their main and specific contribution to pre- and post-natal care, as well as delivery, with consequent negative effects on the well-being of their clients (Loggia, in progress).

5.6. Lack of participation at the decision-making level

There are two main ways in which a population can participate in health programs: at the decision-making level of the community (through local government), and in the execution of a program. According to the Pan American Health Organization, social participation in the decision-making process on the policies that concern the population is a civil right, and it is the only valid way for government institutions and services to successfully carry out their programs (as opposed to more vertical and authoritarian approaches). In compliance with this principle, Progresa documents state that the local authorities, the Health Auxiliaries and Health Committees, should participate in the planning, implementation and evaluation of the Program. All members of the Committees are supposed to receive training in how to plan and execute projects, as well as in how to administrate resources. Yet research done in several communities in the state of Oaxaca found that

local authorities were not consulted about priorities or asked to share their experience. They were not informed about the functioning of the Program, but were simply invited to its inauguration so that a publicity photograph could be taken. Progresa established direct relationships with mothers and excluded the community Committee as a source of collective decision-making and control. Mothers' co-responsibility in the Program's functioning did not in any way imply the community's active participation in the design, monitoring, or evaluation of the Program (Sesia, 2001; Red, 2000).

A high level of participation is demanded by Progresa, especially from the female part of the population who work as Health Promoters and Auxiliaries,[15] but only at the level of execution of the program, not at the decision-making level.

6. What do Indian communities want? The National Indian Institute Forums, 2001

At the beginning of 2001, Mexico's National Indian Institute (*Instituto Nacional Indigenista*, INI)[16] organized a series of community meetings, with the purpose of complying with the constitutional mandate of holding public consultations before National Development Plans are submitted by the President to Congress. The intention of the INI community meetings was to document the demands of the Indian population for the 2001-2006 Plan. The INI organized 33 consultation forums in 23 States with around 3,000 participants, including traditional authorities, community leaders, teachers, and representatives of Indian organizations. The meetings were structured around eight topics: bilingual and intercultural education, culture, health and nutrition, gender equity, environment, sustainable social development, administration of justice, and migration (INI, 2001).

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15. Another program, the Program for the Extension of Coverage (*Programa de Ampliación de Cobertura*, PAC) requires that communities appoint Health Auxiliaries to perform eleven activities, such as giving talks, sending patients to medical units, preparing monthly and daily activity schedules, carrying out epidemiological control, and so forth. For performing all of these tasks, Auxiliaries are paid around 27 dollars a month.

16. In 2003 the INI changed its name to *Comisión Nacional para el Desarrollo de los Pueblos Indígenas* (National Commission for the Development of Indian Peoples).

The results of the forums showed that in most communities participants clearly perceived and stressed the interconnection between poverty, malnutrition, poor health and high mortality.[17] Given that good health requires good nutrition, the main demand in regards to health was for an economic policy which would reactivate regional development and improve prices for agricultural production, generating sustainable economic growth and decent incomes. Another generalized demand was that Indian cultural rights be recognized – in particular, that traditional medicine be respected, recognized, and given support in its own right and not as a mere appendix to institutional medicine (INI, 2001). This coincides with demands voiced in Indian women's forums on reproductive health and rights, particularly in connection to midwives' subordinate situation (Memorias, 1999; Grupo, 2002).

With regards to Progresa, the Indian communities consulted by the INI wanted the Program to be extended to all families in a given community. They argued that the standards of living of the extreme poor and the not-so-poor are not so different as to justify not distributing aid equally to all. Also, they consider the avoidance of intra-community divisions to be a priority. Furthermore, they made a generalized demand that Progresa expand its services to all the extremely poor and poor communities it has not yet reached, as they are in much need of support. In the same vein, representatives at the forums wanted the government to expand and improve its permanent health infrastructure and services at the local and regional levels. INI forum participants demanded more hospitals for Indian areas, better equipment in those that already exist, and better pay and training for medical personnel. Another much-repeated request was for the participation of Indian authorities and organizations in the planning of public programs and in the administration of resources. Finally, it is notable that in many of the forums, participants emphasized that Indian communities are tired of always asking for the same things and never receiving them (INI, 2001).

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17. One of the main demands of the Indian Zapatista rebellion which occurred in the state of Chiapas (the poorest state and that with the worse health and mortality indicators) in 1994 was that they did not want the Indian population to continue dying of preventable diseases and malnutrition.

7. The point of view of Progresa's health service providers

There are few studies dealing with what the Program's health service providers think about their work and their relationship with the beneficiary population, as well as their observations on the Programs' strengths and weaknesses. More research is sorely needed on this most valuable source of information, but there do exist at least three studies which have gathered important information that can serve as a departure point. One of the studies was done by the Program's own authorities, and the other two by independent researchers. The contrast between the results of the study done by the Program and the other two raises questions on how information is gathered: especially who asks what and in what context, since it is evident that the responses elicited can be constrained by these circumstances.

The government study is based on a questionnaire distributed to Social Security personnel (IMSS-Solidaridad) responsible for the health component of Progresa, during an annual meeting held in the city of Veracruz in February 2000. The respondents were doctors, supervisors, administrative personnel and directors of the hospitals which service Progresa beneficiaries in several states of the country. The questionnaires were anonymous and 408 participants agreed voluntarily to respond to them. The researchers analyzing the results thought it important to point out that not all questions were answered, and that they only considered those cases which had complete information. Fully 17.4% of the questionnaires – a very high proportion – were incomplete and therefore excluded. The questionnaire consisted of a total of 77 questions dealing with the following topics: I. Inter-institutional coordination for the health component of Progresa. II. The health services assistance register. III. Co-responsibility of beneficiaries in health matters. IV. Benefits of the educational health forums. V. Impact of the preventative health measures implemented by Progresa. VI. Distribution and impact of food supplements. VII. Effective strengthening of the supply of health services. VIII. Consequences of the increase in the demand for health services since Progresa began operating. IX. General opinion of Progresa's performance.

The questions having to do with the last two topics were the ones that received fewer answers, and it can be speculated whether the cause

was the delicate nature of the topics, or whether respondents had simply become tired of responding to such a long questionnaire.

In general, the analysts of the questionnaires find that favorable opinions are more frequent on most of the topics, which is interpreted as reflecting "that there is a positive attitude of the personnel towards the operation of Progresa's health component" (Murillo and Ortíz, 2000, p. 97). Unfavorable opinions did not exceed 12% of responses on any topic, but one out of ten seems to be a significant figure. What is even more remarkable is that on several topics the percentage of those who responded "undecided" surpassed 50%, making them the majority. This is the case with questions dealing with: 1) the functioning of the register of health services beneficiaries, which elicited almost 60% undecided opinions (and 12% unfavorable); 2) questions dealing with the co-responsibility of Progresa's beneficiaries in health matters, which got 46% undecided opinions; 3) questions about the Progresa's general performance, which recieved almost one half undecided opinions, and 11.6% unfavorable. Nonetheless, the majority of the health personnel has a clearly favorable opinion of the Program's results with regards to preventive actions (71%) and the distribution of food supplements (70.2%) (Murillo and Ortíz, 2000, p. 88-99).

An outstanding problem with this study is that, in an effort to get a global view of the personnel's general opinions, the technique of analysis[18] employed aggregates responses and, as a result, the richness and heterogeneity of the answers to specific questions is lost. Thus, a potentially useful tool for identifying the Program's unresolved problems or unmet needs is wasted, because the aim is exclusively to emphasize positive achievements, even if it means forcing the interpretation of results. The following citation of the study's closing remarks is an example of this tendency:

> "The positive directionality of the health personnel's perceptions [with regards to preventive actions] leads to the conclusion that the

18. One of the most frequently used scales for measuring attitude and global opinions of individuals (the Likert scale) was used. The respondent has to express his degree of acceptance or disagreement with regards to a statement. Answers are classified according to their coherence with a certain directionality and given marks, which are added to obtain the total qualification of the attitude of the respondent towards the object of the inquiry (Murillo and Ortíz, 2000, p. 85).

> nutritional condition of children under five has improved, and that there have been advances in the prevention of cervical-uterine cancer, in the regulation of fertility, and in the decrease in family violence. The opinions expressed with regard to questions about nutritional supplements show that health personnel feel that their distribution works adequately, and that, from their point of view, they are accepted by the beneficiary population, fulfilling the objective of helping to prevent and overcome infant malnutrition." (Murillo and Ortíz, 2000, p. 99, my translation).

In this text, the authors confuse the Program's goals, the service providers' opinions, and achieved results. Although it is true that Progresa's quantitative evaluations showed that the nutritional condition of children under five improved in beneficiary families, these evaluations did not demonstrate an improvement in the prevention of cervical-uterine cancer. As the experience of women beneficiaries shows, an increase in Pap tests does not necessarily imply prevention. It also seems unwarranted to stress advances in the regulation of fertility in rural areas, when the unsatisfied demand of contraceptives continued to be almost 30%, according to the calculations of another researcher of the same government sponsored study (Huerta and Hernández, 2000, p. 57). Concerning family violence, this was not a topic researched by the evaluations, and up to the present there are no public programs to address it in rural areas, where it continues to have important reproductive health consequences.[19]

The text quoted illustrates a recurrent problem with institutional publications: the authors of the text tend to follow the official institutional discourse and expectations when they interpret the results of evaluations, giving an excessively contented image of the government program's achievements. The idea that evaluations should serve to uncover unmet needs and pending problems in a program is overlooked. This is why Boltvinik (2003*b*), an outstanding researcher of poverty issues, has said that most of Progresa's self-evaluations seem closer to government propaganda than to true evaluations.

Other studies dealing with the service providers' point of view – done with a qualitative approach by independent researchers – give

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19. Freyermuth (2000) and González Montes (2001) show the direct links that exist between husbands' violence towards their wives and their reproductive health, in two different Indian regions.

different results. Adato *et al.* (2000*a*) interviewed 17 doctors who worked for the Program in various regions, and of these, 13 showed coincidence with the beneficiaries' ideas that the fact that Progresa does not cover everyone in a given community creates gossip and divisions, because non-beneficiaries are angry at not being included and don't want to collaborate with collective tasks in which everyone participated prior to the introduction of the Program.

Another issue, brought up by Castañeda (1999, p. 28), is that the institutional emphasis on measuring performance in terms of the accomplishment of quantitative goals of extending coverage of services has put a lot of pressure on medical personnel. To fulfill quantitative goals, these staff must not only treat more patients, but they also take on added paper-work, because they must register what they do. In Oaxaca, for instance, Progresa doctors have to comply with pre-established productivity targets involving an increase in the number of women active in Family Planning, the number of births attended to, the number of children under five whose nutrition is monitored, the number of vaccines applied, the number of diabetics under care, and so forth. Doctors have to record their activities in five different paper forms, and they state that one of the main problems of institutional and community personnel is an excessive workload.

With this information in mind, we may hypothesize that the very high proportion of "undecided" opinions in the first study reviewed in this section (Progresa, 2000*b*), might be attributed to the fact that health personnel are aware of the problems mentioned in Adato's and Castañeda's studies but do not feel free to express this awareness. This may not be so much out of fear of retaliation (something to be taken into account because even if their responses were anonymous, they were still in a work-place context), but out of a general feeling of loyalty to the institution they work for and a feeling of identification with the Program's purpose. We may speculate that this might be a case of "cognitive dissonance", by which I mean that the individuals could not come to terms with the contradictions created between their daily work experiences and their institutional training and perspective. If this were true, the "undecided" response could be interpreted as an expression of "mixed feelings".

8. Conclusions

The evaluations reviewed address a very disparate set of questions. On one hand, Progresa's self-evaluations look into institutional target performance, basically in terms of the expansion of its preventive actions and the impact of the services it provides. On the other hand, independent evaluations and forums which gather information on the beneficiaries' and providers' points of view call attention to important problems both in the availability and the quality of services. One preliminary conclusion could be that both approaches are complementary, one pointing to achievements, and the other revealing and underscoring unmet needs. Undoubtedly the second source of information would be most useful when planning to improve the Program and correct its deficiencies and side-effects (including some unintentionally harmful ones), as well as in setting future priorities. In this sense, a first recommendation would be that programs should establish mechanisms for recording the perspectives of both their health personnel and the populations they serve. The next question is what kind of mechanisms should be used for this purpose: Periodic opinion polls? A constant dialogue between policy-makers, administrators, service providers and the populations they serve?

The subject is complex and problematic. The World Health Organization, the Pan American Health Organization, and the World Bank have all made it clear that a local population's participation is important if programs are to be successful; otherwise "beneficiaries" simply become passive (oftentimes reluctant) targets/recipients of interventions. An additional question is what type of participation should be promoted. In the specific case of Mexico's Indian population this is a particularly pertinent question because there is a growing Indian movement that demands autonomy – that is to say, it aims at participating at the decision-making level, not just at the operations end of affairs (Oehmichen, 2000). Thus, participation cannot be a matter of merely eliciting and collecting the perceptions and points of view of the Indian population (though this certainly needs to be done, and to a certain extent has been, as in the case of the INI consultations mentioned above). This is something we have to come to grips with as

researchers in our future studies of policy-making and the implementation of programs: whether participation means active intervention in decision-making or consultations which can easily be manipulated and forgotten.

The World Bank (the most influential policy-making institution) has taken some first steps in acknowledging the problem and has been keen on looking into all evaluations of Progresa. Its New Millennium Agenda for Mexico, published in 2001 and based on the latest findings of these evaluations, recognizes that "there is a lack of fit of poverty programs with indigenous interests and needs" (World Bank, 2001*b*, p. 546). The Agenda has taken up many ideas of Progresa's critics and recognizes that "Progresa has sound features, but there may be areas for improvement" (p. 587-590). These include the following:

1) A recognition that conflict exists between the strongly individualistic and profit-maximizing approach followed by Progresa's subsidies, and indigenous values and lifestyle, in which extended family and community relationships continue to shape decision-making. Individual distribution of the subsidies will not work – at least not without incurring important social cost (p. 546).
2) In communities where the majority of the population lives in great poverty, the World Bank Agenda proposes the incorporation of all families into the Program, to avoid the cost of loosening social cohesion. "In these communities, rather than leaving a few families without access to the program, it may be better to grant it to all to avoid conflicts" (p. 588).
3) The Agenda recognizes that indigenous community dynamics should be taken into account and that community organizations should be asked to participate in the local management of programs. More control of services should be given to indigenous communities and neighborhoods. To carry this out, it is necessary to "train local government and local leaders in accounting, administrative, organizational, and negotiation skills" (p. 551).
4) Professionals must be trained in culturally sensitive planning and rural development. There must be improvements in the bilingual curriculum for bilingual empowerment, introducing a new national general curriculum based on a multicultural model (p. 551).

5) Mechanisms for decentralizing and improving regional planning should meet indigenous community and urban neighborhood needs (p. 551). In general, the idea is that indigenous peoples should be "key actors" and that government programs should adapt to local conditions and cultural characteristics (p. 551-552).

As can be seen, these proposals retrieve many of the ideas and demands voiced by communities and beneficiaries in the materials here reviewed. Nonetheless, some very crucial elements that affect reproductive health, brought up by the "key actors" involved, are still missing. These are:

1. The need to extend the aid and services provided by Progresa/Oportunidades to all those communities below the poverty line, especially those without access to clinics and schools, which are the ones that are worst-off and that are not covered at present by the Program. This point was framed as a demand by the representatives from Indian communities from various regions of the country who attended the forums organized by the National Indian Institute.
2. Both the INI forums and women's meetings and focus groups have consistently emphasized the need to expand and improve health infrastructure and personnel, to assure not only the availability but also the quality of services. Health providers also stressed this need, as insufficient material and human resources mean that their workload is increased and that they cannot provide the best services possible.
3. In communities below the poverty line, services should be free, as they were in the past. Having to pay for medical care with subsidy money reduces the proposed benefits of the subsidy for nutrition and education. On the other hand, paying with "volunteer" work means an increase in women's workload. Health and reproductive health programs in particular should not rely on unpaid (or quasi-free) female labor as a means of solving budget cuts or problems of insufficient institutional resources.[20] Unpaid or poorly paid providers of health services should have adequate incomes. The contributions to reproductive health care

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20. Espinosa (2002, p. 30) presents the evolution of cuts in the government's Reproductive Health budget for the period 1994-1997 (using the Ministry of Health's Bulletin of Statistical Information), and concludes that they result in a greater workload and added responsibilities for women.

of midwives in particular should be taken into account and given adequate economic support.

4. Reproductive rights should be guaranteed. The delivery of subsidies and services should not be used to pressure women into accepting sterilizations they do not want. More funds should be allocated for family planning, to cover the existing unsatisfied demand. Open communication and respectful treatment should be the basis of the health providers' relationship with the Indian population.
5. More efforts should be made to build effective ways of contributing to gender equity, especially by encouraging the participation of men in health programs.

As can be seen, these are quite strategic proposals. More than that, they are actual demands on the part of the key local actors, for improving and expanding the Program. These points are not accounted for in the official evaluations of Progresa nor in the World Bank's Agenda, but they were registered by studies interested in investigating what the local participants had to say. The fact that points 3, 4, and 5 of this set of proposals derive from the specific concerns of independent researchers about Progresa's gender impact, highlights the importance of applying a gender perspective to the evaluation of programs.

But even if beneficiaries and health care providers have a decisive contribution to make to the identification of unmet needs, we can see that there are limits as to what was addressed in the studies reviewed. A prominent absence is the need for work on HIV-AIDS prevention, as part of an integrated approach to reproductive health programs in rural and Indian areas, particularly taking into account that migration has increased in recent years. Also, in spite of being very grave problems, maternal mortality and domestic violence did not come up or only came up tangentially in the studies based on the beneficiaries' and health providers' point of view regarding Progresa, which seem to have focused on what the interviewees considered to be their most urgent and immediate needs and priorities with respect to what the Program offers.

The studies reviewed are quite pioneering, as they have opened a new road which requires further work. At the same time, they prove the importance of independent academic analysis, based on multiple sources of information. Developing a comprehensive framework for

policy analysis requires acknowledging that seemingly-objective evaluations are not always free from political bias, either in the selection of the "facts" to be approached, or in the processing, interpretation, and use of those facts. The various approaches and methodologies followed by evaluations, and the results they arrive at, are in themselves a topic in need of research and debate, as are the Indian population's general morbidity, mortality, and reproductive health, inequalities in the distribution of institutional resources, and the availability and quality of public services for these same communities.

A final and disturbing question is: what does it take to meet the needs that research discloses, to move from the level of the "politically correct" rhetoric of articulating needs to the actual implementation of responses? The first three points of the local actors' demands which I have presented require expansion of the government's investment in programs like Progresa/Oportunidades. More funds are also needed for respectful family-planning, research on the evolution of Indian nutrition and reproductive health indicators, programs for training personnel in cultural competence and for improving and expanding reproductive health information and services for the rural population. It is evident that without adequate financial resources the availability and quality of services are jeopardized. Unfortunately, the current policy is to continue cutting public social expenditure (of which health care is a part), and further targeting the population already being served. This occurs at a time when economic policies, instead of diminishing poverty, have continued to produce more poor. Thus, the prospects for a positive response to local actors' demands do not seem encouraging.

References

ADATO, Michelle, *et al.* (2000*a*), *An Operations Evaluation of Progresa from the Perspective of Beneficiaries, Promotoras, School Directors, and Health Staff*, Final report submitted to Progresa and the International Food Policy Research Institute, mimeo, Washington D.C.

ADATO, Michelle, *et al.* (2000*b*), *Progresa and Women's Status: Qualitative Evidence and Insights from Six Mexican States*, Preliminary report submitted to Progresa and the International Food Policy Research Institute, mimeo, Washington D.C.

AGUIRRE BELTRÁN, Gonzalo (1980) [1955], *Programas de salud en la situación intercultural*, Instituto Mexicano del Seguro Social, México.

ALARCÓN, Francisco (1993), *Prioridades en Salud Reproductiva*, Conferencia Interamericana de Seguridad Social, Serie Estudios 3, México.

BOLTVINIK, Julio (2001), "Pobreza indígena", *La Jornada*, May 4, p. 28.

BOLTVINIK, Julio (2003*a*), "Pobreza indígena por tamaño de localidad", *La Jornada*, April 18, p. 22.

BOLTVINIK, Julio (2003*b*), "Evaluaciones *light* del Oportunidades", *La Jornada*, April 25, p. 26.

BOLTVINIK, Julio (2003*c*), "La pobreza en México", *La Jornada*, June 13, p. 28.

CAO, Laura (1998), "Entre parteras y médicos: Diálogos sobre atención a la salud", in: *Los silencios de la salud reproductiva: violencia, sexualidad y derechos reproductivos*, Asociación Mexicana de Estudios de Población/Fundación MacArthur, México, D.F., p. 193-222.

CASTAÑEDA, Martha (1999), *El Programa de Ampliación de Cobertura en Comunidades Indígenas de Oaxaca: Participación comunitaria y perspectiva de género*, Centro de Estudios de la Mujer y la Familia, A.C. (CEMYF), Oaxaca, ms.

CASTAÑEDA, Martha (2001), *PROGRESA: pobreza en el cuerpo y sentires de las mujeres*, ms.

CASTAÑEDA, Martha, and Sergio LERIN (1999), "Capacitación a parteras tradicionales: ¿Articulación o desfase con el sistema institucional de salud?", in: E. Tuñón, ed., *Género y salud en el Sureste de México*, El Colegio de la Frontera Sur/Consejo Estatal de Población de Chiapas, México, vol. 2, p. 129-168.

ESPINOSA, Gisela, and L. PAZ (2000), "Salud reproductiva en México. Los programas, los procesos, los recursos financieros", in: G. Espinosa, ed., *Compromisos y realidades de la salud reproductiva en México. Una mirada a la situación nacional y a cuatro estados*, El Atajo Eds., UAM-Xochimilco, Foro Nacional de Mujeres y Políticas de Población, México, p. 23-171.

ESPINOSA, Gisela (2002), *Gasto económico y costo social. Una reflexión sobre la salud reproductiva*, Foro Nacional de Mujeres y Políticas de Población, México D.F.

FREYERMUTH, Graciela (2000), *Morir en Chenalhó. Género, etnia y generación, factores constitutivos del riesgo durante la maternidad*, Doctoral thesis in social anthropology, UNAM, Mexico.

FREYERMUTH, Graciela (2002), "Salud sexual y reproductiva. Desafíos para Chiapas, Guerrero, Oaxaca, Veracruz y Puebla", in: Grupo de Estudios sobre la Mujer "Rosario Castellanos", A.C., *Mujeres indígenas y su salud sexual y reproductiva: Un espacio para la reflexión y la participación. Memoria*, Oaxaca, p. 9-35.

GERTLER, Paul (2000), "El impacto del Programa de Educación, Salud y Alimentación (Progresa) sobre la salud", in: *Progresa. Más oportunidades para las familias pobres. Evaluación de resultados del Programa de Educación, Salud y Alimentación. Salud*, México, p. 3-42.

GOMEZ DANTES, Octavio (2001), "Qué hacemos con la salud de los pobres", *Este País*, no. 122 (May), p. 26-31.

GONZÁLEZ MONTES, Soledad (2001), "Two cultural approaches for understanding the reproductive health consequences of marital violence in an Indian area of Mexico",

in: Carla Makhlouf Obermeyer, ed., *Cultural Perspectives on Reproductive Health*, Oxford University Press, New York, p. 233-252.

GRUPO DE ESTUDIOS SOBRE LA MUJER "ROSARIO CASTELLANOS", A.C. (2002), *Mujeres indígenas y su salud sexual y reproductiva: Un espacio para la reflexión y la participación. Memoria*, Oaxaca.

HUERTA, Ma. del Carmen, and D. HERNANDEZ (2000), "Algunos aspectos de salud reproductiva de la población beneficiaria de Progresa", in: *Progresa. Más oportunidades para las familias pobres. Evaluación de resultados del Programa de Educación, Salud y Alimentación. Salud*, México, p. 45-80.

INSTITUTO NACIONAL INDIGENISTA (2000), *Estado del desarrollo económico y social de los pueblos indígenas de México, 1996-1997*, INI/PNUD, México.

INSTITUTO NACIONAL INDIGENISTA (2001), *Resultados de la consulta ciudadana sobre los pueblos indígenas*, México, ms.

JURADO, Ma. Eugenia, *et al.* (2001), *Microrregiones prioritarias de SEDESOL. Análisis comparativo*, Instituto Nacional Indigenista, México, ms.

LANGER, Ana, and G. NIGENDA (2000), *Salud sexual y reproductiva y reforma del sector salud en América Latina y el Caribe. Desafíos y oportunidades*, Population Council, Banco Interamericano de Desarrollo, Instituto Nacional de Salud Pública, México.

LANGER, Ana, *et al.* (1994), "La morbimortalidad materna en México: niveles y causas", in: Ma. del Carmen Elu and Ana Langer, eds., *Maternidad sin riesgos en México*, Instituto Mexicano de Estudios Sociales, Comité Promotor de la Iniciativa por una Maternidad sin Riesgos en México, México, p. 23-30.

LOGGIA, Silvia (in progress), "Los programas de salud reproductiva en el contexto intercultural: Un acercamiento a las representaciones y prácticas de los agentes de la medicina institucional en una zona indígena", Doctoral thesis, CEDDU, El Colegio de México.

LOZANO, Rafael, *et al.* (1993), *Desigualdad, pobreza y salud en México*, Consejo Consultivo del Programa Nacional de Solidaridad, El Nacional, México.

MEMORIA DEL FORO SURESTE (1999), "Las mujeres indígenas y sus derechos reproductivos y sexuales", Oaxaca, Oaxaca, July 23-24.

MEMORIA DEL FORO CENTRO (1999), "Las mujeres indígenas y sus derechos reproductivos y sexuales", Morelia, Michoacán, September 23-24.

MEMORIA DEL FORO NACIONAL (1999), "Las mujeres indígenas y sus derechos reproductivos", México D.F., October 11.

MURILLO, Sandra, and Ana ORTÍZ (2000), "Opinión del personal del IMSS-Solidaridad sobre aspectos de la operación del componente salud de Progresa", in: *Progresa. Más oportunidades para las familias pobres. Evaluación de resultados del Programa de Educación, Salud y Alimentación. Salud*, México, p. 83-100.

NAHMAD, Salomón, *et al.* (1998), "Acercamiento etnográfico y cultural sobre el impacto del programa Progresa en doce comunidades de seis estados de la República", in: José Gómez y R. Loyola, eds., *Alivio a la pobreza: Análisis del Programa de Educación, Salud y Alimentación dentro de la política social. Memoria del seminario*, Centro de Investigaciones y Estudios Superiores en Antropología Social, México, p. 62-113.

NIGENDA, Gustavo, *et al.* (2001), *Descentralización de los servicios de salud y los programas de salud reproductiva: Situación en cuatro estados de México*, Instituto Nacional de Salud Pública/ Fundación Mexicana para la Salud/Fundación Ford.

OEHMICHEN, Cristina (2000), "El indigenismo y el modelo gubernamental de la política social neoliberal", *Cuadernos Agrarios*, Nueva Epoca no. 16, p. 47-62.

PARRA, Pilar (1991), "La mujer rural, las comadronas y el sistema mexicano de salud", *Estudios Demográficos y Urbanos*, no. 16, p. 69-89.

PROGRESA (1999), *Evaluación de Resultados del Programa de Educación, Salud y Alimentación. Educación. Primeros avances*, México D.F.

PROGRESA (2000*a*), *Evaluación de resultados del Programa de Educación, Salud y Alimentación. Educación*, México.

PROGRESA (2000*b*), *Evaluación de resultados del Programa de Educación, Salud y Alimentación. Salud*, México.

PROGRESA (2000*c*), *Evaluación de resultados del Programa de Educación, Salud y Alimentación. Alimentación*, México.

PROGRESA (2000*d*), *Evaluación de resultados del Programa de Educación, Salud y Alimentación. Impacto a nivel comunitario*, México.

PROGRESA (2000*e*), *Evaluación de resultados del Programa de Educación, Salud y Alimentación. Impacto en el trabajo y las relaciones intrafamiliares*, México.

RED NACIONAL DE PROMOTORAS Y ASESORAS RURALES (2000), *'Dinero del diablo'. Ejercicio de revisión desde la perspectiva de género del Programa de Educación, Salud y Alimentación (PROGRESA)*, ms. Document presented at the National Forum on Food Security, organized by the Red and Congress, held May 2000.

SECRETARIA DE SALUD (1999), *La salud reproductiva en comunidades indígenas. Una propuesta institucional*, Secretaría de Salud, Dirección General de Salud Reproductiva, México.

SEPULVEDA, Jaime, ed. (1993), *La salud de los pueblos indígenas en México*, Secretaría de Salud/Instituto Nacional Indigenista, México.

SESIA, Paola (2001), "'Aquí la Progresa está muy dura': Estado, negociación e identidad entre familias indígenas rurales", *Desacatos*, no. 8, p. 109-128.

TUIRAN, Alejandro (2001), "La pobreza y la política social en México. Mitos y realidades", *Este País*, May, p. 16-24.

WORLD BANK (1995), *Toward Gender Equality. The Role of Public Policy*, World Bank, Washington, D.C.

WORLD BANK (2001*a*), *Engendering Development Through Gender Equality in Rights, Resources, and Voice*, World Bank, Oxford University.

WORLD BANK (2001*b*), *Mexico. A Comprehensive Development Agenda for the New Era*, Washington, D.C.

YASCHINE, Iliana (1999), "The changing anti-poverty agenda. What can the Mexican case tell us?", *IDS Bulletin*, Institute of Development Studies, University of Sussex, Brighton, p. 47-59.

ZAVALA DE COSIO, Ma. Eugenia (1992), *Cambios de fecundidad en México y políticas de población*, El Colegio de México, Fondo de Cultura Económica, México.

15

REPRODUCTIVE RIGHTS OF WOMEN AND MEN IN LIGHT OF THE NEW LEGISLATION ON VOLUNTARY STERILIZATION IN BRAZIL

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1. Introduction

Voluntary female sterilization had long been a common practice in the private health sector in Brazil as a means of controlling fertility. In the public health sector, however, sterilization was not permitted. That is, the public health system was not allowed to pay for female sterilization surgeries. Nevertheless it is common knowledge that such surgeries were in fact regularly performed during childbirth by Caesarean section (Barros *et al.*, 1991; Faúndes and Cecatti, 1991 and 1993; Ber-

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quó, 1993; Hopkins, 1998; Souza, 2001), and sometimes recorded as other medical procedures (Caetano, 2000).

As a result of these practices, female sterilization was the most frequent of all contraceptive methods for many years. According to PNDS data of 1996, 52% of all contraceptive procedures consisted of female sterilization, followed, in second place and at a considerable distance, by the pill, used by 27% of the female population. Male sterilization, on the other hand, was less common (3.4%) than traditional methods such as periodic abstinence (4.0%) and *coitus interruptus* (4.0%) (PNDS, 1997).

Despite the non-existence of any specific law to prohibit the performance of voluntary sterilization, it was nevertheless banned on the basis of the Brazilian Penal Code (enacted in 1940), specifically related to an interpretation of Article 129, Paragraph 2, III, which states that any physical damage of serious nature resulting in permanent weakness of a member, sense, or function of the body is considered a crime. Voluntary sterilization was therefore interpreted as a criminal offense, since it results in loss or incapacity of the reproductive function, and carries with it a penalty of one to eight years' imprisonment.

The Code of Medical Ethics (Federal Medical Board Resolution No. 1154, of 1984) prohibited voluntary sterilization until 1988, although exceptional cases were considered when there existed precise medical indication attested to by two physicians heard in conference. In 1998 the Code of Medical Ethics was amended, and the previous resolution was revoked by a new version that explicitly required physicians to comply with the general legislation related to transplants of organs or tissues, sterilization, artificial fertilization, and abortion (Article 43).

The illegality and the concurrent high demand for sterilization largely explain why tubal ligations were so frequently performed during Caesarean sections in the private sector. This fact has often been cited as one of the causes of the extremely high rate of c-section deliveries in Brazil, and the high association between Caesarean sections and female sterilization. According to the 1996 PNDS, more than 50% of all sterilizations performed in Brazil occurred during c-section births. In the more developed regions of the country, estimates are that this proportion rises to 70% of all sterilizations, clearly indicating an abuse of this procedure as a means of sterilization.

In addition to the fact that voluntary sterilization was not mentioned in the legislation, family planning itself had not been regulated in Brazil, and only recently has legislation on reproductive health and rights been approved. In 1997, female and male voluntary surgical sterilization was regulated by Health Ministry Decree 144, in accordance with Law No. 9263, of 1996, within a broader body of legislation on family planning (Brasil, 1997*a* and 1997*b*). The main clause of the law regarding voluntary sterilization states that:

> Art. 10 — Voluntary sterilization is allowed only in the following situations: I - Men or women with full civil capacity and at least twenty-five years of age or with at least two living children; there must also be a minimum waiting period of sixty days between application for the procedure, and the surgery itself, during which time the interested persons shall have access to some fertility regulation service, including interdisciplinary group counseling, with the objective of discouraging precocious sterilization; II - risk to life or health of the woman or her future children, attested to in a written report and signed by two physicians. (Law N. 9263, January 12, 1996). (A translation of the part of the law on voluntary sterilization is presented in Appendix I.)

The decree No. 144 set down the codes for medical procedures allowing the public health system to pay for voluntary sterilization. It also specified the rules that hospitals must adhere to in order to obtain authorization to perform sterilizations paid for by the Public Health System. Additionally, it provided the means for accrediting physicians, as well as the individual data forms to be filled out to inform the system regarding tubal ligations and vasectomies, including data on patients' address, sex, date of birth, number of children, and schooling. This decree remained unchanged for two years, and few hospitals were accredited. As a consequence, few sterilizations were reported during this period.

In February of 1999 there was a significant change in the regulations of the law, through Decree No. 48 (Brasil, 1999), establishing norms and mechanisms to control and enforce the law. The major modification brought about by this decree was the prohibition of any tubal ligation during delivery or abortion, or within 42 days following either procedure, except in cases of previous successive Caesarean sections and other proven health problems. It is interesting to note that, in practice, three successive Caesarean sections are required before female

sterilization during delivery can be performed, although the decree does not explicitly state this criterion.

2. Objective

The main objective of this paper is to evaluate the impacts that the recent law on family planning, regarding voluntary sterilization in the public health system, has had on the reproductive rights of women and men in Brazil.

The specific objectives proposed in this paper are: 1) to verify whether the criteria stated in the law have been complied with in the current practices of female and male sterilization in the public health system; 2) to investigate how medical personnel perceive the criteria set forth in the law; and 3) to estimate the average waiting time between application for sterilization and its attainment, in order to ascertain whether the two-month waiting period following application has been complied with and, on the other hand, verify whether women and men have to wait a long time before entering surgery.

In order to describe the scenario of contraception in Brazil we divided the paper into two parts. First we present secondary data, collected from the National Demographic Health Survey of 1996 (PNDS, 1997), as well as data available from the administrative records of the public health system (DATASUS) regarding male and female sterilization paid for by the SUS. In the second part we present the methods, data and results of the survey carried out to attain the purposes of the research described above.

3. The context of voluntary sterilization in Brazil

3.1. Background on female sterilization

The most recent data available, PNDS 1996, indicate that 40% of all married Brazilian women in reproductive age had been sterilized by that time. This rate varies from 29% in the South to 59% in the Central-Western Region. With the exception of the State of Rio de Janeiro, which also has a high percentage of sterilized women, one could say

that female sterilization is in the lead among all contraceptive methods used in the less developed regions (Table 1).

Table 1
Female sterilization among married women by region and by years of schooling, Brazil, 1996

Characteristics	% of sterilized women	Female sterilization in relation to all modern methods (%)
Region		
State of Rio de Janeiro	46.3	60.8
State of São Paulo	33.6	47.0
South	29.0	40.0
Central-East	38.8	54.8
Northeast	43.9	70.5
North	51.3	75.3
Central-West	59.5	73.5
Years of education		
None	45.7	80.7
1-3	44.9	70.5
4	40.4	58.7
5-8	36.9	49.5
9-11	38.8	51.4
12 or more	35.7	46.8

Source: PNDS, 1997.

Due to the role that female sterilization has taken on among modern contraceptive methods, other alternatives have been decreasing throughout the country. In 1986 female sterilization represented 49% of such methods, and rose to 57% by 1996. This concentration was most evident in the Northeastern (70%), the Northern (75%) and the Central-Western regions (73%) (see Table 1).

Educational levels also show a significant correlation with the practice of female sterilization. The percentage of sterilized women in Brazil in 1966 varied from 46 among illiterates to 36 among women with 12 or more years of schooling (Table 1). The situation of illiterate women, usually the poorest, is shocking, since sterilization represents virtually their only access to some modern contraceptive method.

Female sterilization is occurring ever earlier in women's lives. Data from the 1996 PNDS show that the median age for sterilization at that time was 28.9 years, whereas ten years earlier, the average age was 31.4. The figures in Table 2 show that most sterilizations are carried out at very young ages: 20% of all sterilized women underwent this procedure before the age of 25, and 57% before the age of 30.

Table 2
Distribution of sterilized women
by age at surgery, Brazil, 1996

Age at sterilization (in years)	Sterilized women (%)
Less than 25	20.5
25-29	36.6
30-34	27.9
35-39	12.2
40-44	2.6
45-49	0.1
Total	100.0

Source: PNDS, 1997.

3.2. Vasectomy

Before the publication in 1997 of the 1996 PNDS, containing results on the reproductive and sexual behavior of the male population aged 15 to 59, the only information on vasectomy available at the national level came from the women's questionnaires of the 1986 and 1996 PNDS, in which all the information was provided by the women. The inclusion of a sample of the male population in the 1996 PNDS then provided more accurate information about male reproductive and sexual behavior.

The results of the PNDS show that almost all men had knowledge of some contraceptive method, either from a spontaneous response or after being prompted by the interviewer. The condom was known by 99.0% of the interviewees, the pill by 97.1%, female sterilization by 87.7%, and male sterilization by 72.3%. Among other modern contra-

ceptive methods, 57.8% of the men knew about injectables, 48.5% mentioned IUDs, and only 36.9% mentioned vaginal methods. It is interesting to note that the men made more frequent references to tubal ligation than to vasectomy as a contraceptive method.

Concerning the use of any contraceptive method, the prevalence of use was respectively 60.4, 74.0, and 73.3% of the entire sample of men, of men in stable unions, and of sexually active men not in stable unions (Table 3).

Table 3
Percentage of men aged 15-59 using contraception, according to method chosen, Brazil, 1996

Current method	All men[a]	Men in stable union[a]	Sexually active men not in stable union[a]
Any method	60.4	74.0	73.3
Modern methods	56.3	68.6	68.8
Pill	15.1	18.7	23.3
IUD	0.8	1.1	0.7
Injectables	0.9	0.9	2.1
Condoms	14.7	5.2	39.8
Female sterilization	23.4	40.3	2.9
Male sterilization	1.4	2.4	0.1
Traditional methods	4.1	5.3	4.5
Periodic abstinence[b]	2.1	2.8	1.7
Withdrawal	2,0	2.5	2.8
Other[c]	0.1	0.1	0.0

a. Also includes methods used by the sexual partner.
b. Periodic abstinence includes *Ogino-Knauss*, *Billings* and temperature.
c. "Other" includes medicinal teas, etc.
Source: PNDS, 1997.

According to the data (Table 3), the highest percentages of methods used by men in stable unions refer to female contraceptive methods, such as sterilization (40.3) and the pill (18.7%). On the other hand, male contraceptive methods used by men correspond to only 5.2% of the condom users, 2.4% of those with vasectomy, and 5.3% of users of traditional methods in this same group. As expected, the condom has a much more important role among the sexually active men not in stable

unions, being used by 39.8% of the men in this group. The percentage of men who have been vasectomized reaches its peak in the age groups of 30-34 and 35-39, being 5.0% and 4.3%, respectively.

As shown in Table 4, contrary to the case of female sterilization (Table 1), the prevalence of vasectomy increases with schooling, although presenting very low percentages of use, and it is more frequent in the Southeastern and Southern regions of the country.

Table 4
Percentage of vasectomized men ages 15 to 59, according to region and years of schooling, Brazil, 1996

Characteristics	% of use of vasectomy
Region	
State of Rio de Janeiro	0.6
State of São Paulo	3.1
South	2.2
Central-East	1.3
Northeast	0.2
North	0.3
Central-West	1.0
Years of education	
0-3	0.4
4	0.0
5-8	1.3
9-11	2.9
12 or more	5.2

Source: PNDS 1997.

3.3. Voluntary sterilization in the SUS since the implementation of the law

As mentioned earlier, the law on family planning, which approved voluntary sterilization, was regulated in mid-1997 and implanted in the public health system only toward the end of that year by creating codes of procedures that permitted and regulated the performance of tubal ligations, thus authorizing the public system to cover the costs of the

surgeries. The same governmental decree maintained the existing code for vasectomy, a procedure that had already been performed and paid for by the public health system since 1992.

According to data from the administrative records of medical procedures there has been a great increase in the number of female sterilizations reported in Brazil (from 293 in 1998 to 15,370 in 2001, Table 5). This increase was seen throughout the country, but mainly in the Southeast. The number of vasectomies, although much smaller than tubal ligations, also showed a growth from 324 in 1999 to 3,142 in 2001. The low use of vasectomy compared to tubal ligation is due in part because reproduction issues are generally seen as the women's responsibility, but it also might be due to a lower demand from males, mainly in the poorest regions, associated to the myth that vasectomy implies a loss of sexual potency, especially in the opinion of men from lower income brackets.

Table 5
Number of female and male sterilizations by geographical region, Brazil, 1992 to 2001

Geographical region	Female sterilization				Male sterilization			
	1998	1999	2000	2001	1992-98	1999	2000	2001
North	26	231	385	596	109	9	33	11
Northeast	121	914	3,104	3,259	679	98	237	236
Southeast	34	472	2,258	7,050	1,942	127	788	1,751
South	107	668	2,322	3,215	86	88	429	659
Central-West	5	248	1,031	1,259	89	2	186	485
Total	293	2,533	9,100	15,379	2,905	324	1,673	3,142

Source: SIH/DATASUS 1992 to 2001.

As mentioned above, the Unified Health System (SUS) has been paying for vasectomies since 1992 and, according to the records, many were reported before 1998. The highest increases in vasectomies also occurred in the Southeastern Region. It should be noted that there was a fall in the number of cases in the North, while few cases were registered and almost no increase was seen in the Northeast during this

same period (Table 5). This may be due to the limited number of physicians accredited to perform this surgery.

As mentioned above, the limited use of vasectomy as a contraceptive method is noteworthy. Nevertheless, it should be recalled that the Unified Health System was paying for vasectomies even when tubal ligations were not, due to the illegality of this latter procedure. Both procedures have therapeutic indications besides sterilization. Sterilization may be indicated for men as surgical treatment in "*vesico epididymis refluence*" in order to avoid infections resulting from surgical complications, especially related to prostate surgery. For women, tubal ligation may be indicated in cases of fallopian tube infections. In this case, however, the medical indication is to remove the tubes and not merely tie them back, as was the case for tubal ligations. Fallopian tube infection, salpingectomy, is the surgery indicated, which consists of the extraction of the infected tubes, a procedure which has long been paid for by SUS.

It cannot be asserted that vasectomy has been performed and paid for by the SUS as contraception. Infections of the nature mentioned above would more likely occur in older men, nonetheless, as can be observed in Table 6, which shows the number of vasectomies paid for by SUS since 1992 according to age, the majority of the vasectomies occurred between ages 25 and 44. Therefore, they were probably performed due to reasons other than health problems, and most likely used as contraception.

Table 6
Number of vasectomies paid for by SUS, according to age group, Brazil and geographical regions, 1993 to 1997

Region	< 24	25-34	35-39	40-44	45-49	50-54	55 and +	Total
North	9	46	20	4	2	3	1	85
Northeast	30	325	126	39	16	10	10	556
Southeast	39	651	363	189	65	27	42	1,376
South	3	28	22	8	5	1	5	72
Central-West	3	47	18	7	4	0	1	80
Total	84	1,097	549	247	92	41	59	2,169

Source: SIH/DATASUS 1993 to 1997.

The demand for female sterilization, on the other hand, could not be paid for directly by the public health system. It is therefore interesting to note the procedures that were adopted by physicians working under the SUS to address at least part of the demand. On the one hand, as was mentioned before, some tubal ligations were carried out during delivery by Caesarean section. On the other hand, unrelated to delivery, physicians performed tubal ligation via SUS using the code for salpingectomy, among other medical procedures, as mentioned in the interviews with some of the health professionals.

It is also worth noting the fact, or the coincidence, that when the code of tubal ligations was issued in 1998, all funds paid out by SUS, such as surgical and hospital expenses and physicians' fees, were exactly the same as those paid out for salpingectomy, according to the DATASUS medical procedure tables.

The distribution of salpingectomies by region prior to the implementation of the law in 1997, by women's age groups (Table 7), shows that, as is the case for vasectomies, the great majority of the cases of salpingectomy (93%) were performed on persons age 39 or under.

Table 7
Number of salpingectomies paid for by SUS,
according to women's age groups. Brazil and regions, 1993 to 1997

Region	15-24	25-34	35-39	40-44	45-49	50-54	55 and +	Total
	Absolute numbers							
North	7,923	15,516	2,606	799	163	64	95	27,166
Northeast	12,608	22,517	4,546	1,549	399	131	166	41,916
Southeast	6,396	31,309	10,245	3,549	577	162	249	52,487
South	1,442	5,158	1,977	817	236	79	83	9,792
Centr.-West	2,438	5,931	1,440	524	165	53	48	10,599
Total	30,807	80,431	20,814	7,238	1,540	489	641	141,960
	Percentages							
North	29.17	57.12	9.59	2.94	0.60	0.24	0.35	100.00
Northeast	30.08	53.72	10.85	3.70	0.95	0.31	0.40	100.00
Southeast	12.19	59.65	19.52	6.76	1.10	0.31	0.47	100.00
South	14.73	52.68	20.19	8.34	2.41	0.81	0.85	100.00
Centr.-West	23.00	55.96	13.59	4.94	1.56	0.50	0.45	100.00
Total	21.70	56.66	14.66	5.10	1.08	0.34	0.45	100.00

Source: SIH/DATASUS 1993 to 1997.

4. Survey to evaluate the impacts of the law on voluntary sterilization

4.1. Methodology

4.1.1. Survey design

A follow-up survey was carried out in six cities, all state capitals (Palmas, in the Northern Region, Recife, in the Northeast, Belo Horizonte and São Paulo, in the Southeast, Curitiba, in the South, and Cuiabá, in the Central-West) during the year 2000 based on the objectives proposed in this paper. The cities were selected among those with high prevalence rates of female sterilization and in heterogeneous stages of implementation of the public health system, covering all the large geographical regions of the country. At the local level, the survey was carried out in collaboration with governmental and non-governmental organizations.

The design of the survey included a follow-up on 30 women (15 pregnant and 15 non-pregnant) and 15 men in each capital city, which were first contacted in a public health establishment and followed up with monthly contacts during six months. Two types of health facilities were defined to serve as the initial points of contact with users. One type is referred to here as a "hospital outpatient service," defined as a health establishment physically attached to a hospital but managed independently. The second type also consists of an outpatient service, but located far from any hospital. One important feature of both of these types of clinical services is that neither performs major surgeries. Therefore, women must be referred to a hospital for sterilization. The major difference, however, is that hospital outpatient services usually refer the patients for surgery at the hospital to which they are attached, thus possibly decreasing bureaucratic difficulties and improving access to surgery. Male sterilization, on the other hand, can be performed in either of these types of clinic, since it can be carried out as an outpatient medical procedure or as hospital surgery.

The outpatient clinics were chosen at random, a total of five in each city, distributed into the two types of clinic described above, according to their availability in the city. The first three female and first three male applicants for sterilization entering each of these clinics following the outset of the survey were chosen to be interviewed,

based on a structured questionnaire. After the initial contact, these interviewees were contacted monthly (in person or by telephone) for the next six months, to verify whether the sterilization had been carried out or refused. When sterilization had occurred or refused, a subsequent face-to-face interview was scheduled.

Besides the follow-up on users, several interviews were carried out with health professionals, also based on structured questionnaires. After completing the quota for the first contact with the users, head coordinator or manager of the clinic was interviewed, resulting in a total of 31 interviews. In addition, five structured interviews with hospital managers were held in each of the cities studied, except Palmas, which has only three hospitals. Finally, the municipal and state coordinators of the reproductive health program were interviewed. The final sample size for each category in the six cities is showed in Table 8.

Table 8
Number of interviews carried out, by category of interviewees

City and State	Pregnant women	Non-pregnant women	Men	Outpatient managers	Hospital managers	Municipal and State reproductive health coordinators
Palmas-TO	15	15	13	5	3	2
Recife-PE	15	15	9	5	5	2
Belo Horiz.-MG	9	16	14	5	5	2
São Paulo-SP	12	13	11	6	5	2
Curitiba-PR	15	16	15	5	5	2
Cuiabá-MT	10	13	9	5	5	2
Total	76	88	71	31	28	12

Source: Multi-centric study on the impact of the new Brazilian legislation on family planning, 2000.

4.1.2. Data analysis methods

The approach used to detect differences that might lead certain patients to be more likely to obtain sterilization in the public health sector consisted mainly of bivariate distributions on selected variables, due to the small sample size. We also focused on investigating whether

any combination of the main criteria stated in the law, i.e., age and number of living children, was or was not a constraint against obtaining sterilization.

The waiting period for sterilization was analyzed by survival analysis, based on the life table approach, in order to detect possible characteristics that might differentiate groups in their probability of obtaining sterilization. Censored cases (0) are defined as those in which the individual failed to obtain sterilization after the period of observation or dropped out of the sample, and cases (1) where the individual was sterilized within this period. In this case, the probability of "survival" is assumed as the probability of not obtaining sterilization, and failure is associated with the probability of obtaining it. The model was estimated by using the *lifetest* procedure in SAS (1999-2000).

As for the interviews with the health professionals, in this paper we analyze only those aspects related to their knowledge of the criteria set down by the law in regard to female and male sterilization. Finally, in order to obtain enough cases for analysis, the data was aggregated, without differentiating trends among cities.

4.2. Results

4.2.1. Regulation of voluntary sterilization at the research sites

Although almost all municipalities were part of the unified health system by 1991, even in 2000, when our fieldwork took place, some had not yet been fully integrated into the system. The municipality of São Paulo is an example: it had two different health systems operating, one at the state level and another at the municipal level. The situation is still more heterogeneous among the various cities in terms of the organization of reproductive health care and, especially, concerning the stage of accreditation of the health units to perform voluntary sterilization.

Among the six cities studied, the most organized, in terms of reproductive health care and availability of family planning services, are Curitiba, Belo Horizonte, and São Paulo, where family planning programs have been operating since 1994. The first two, and the municipal health system in São Paulo, have municipal regulations for performing voluntary sterilization. In Recife and Cuiabá the organization of reproductive health care is more recent and not yet fully implemented at all basic health units. Hence, there is no regulation of voluntary steriliza-

tion. At the beginning of the survey the reproductive health program in Palmas had not yet been implemented, although it had been planned since 1997. It was finally implemented and a protocol was defined to regulate and address the demand for female sterilization.

It is important to note that where local regulations for voluntary sterilization exist, they are not perfectly aligned with the norms and criteria set forth by the family planning law. Indeed, they restrict access to voluntary sterilization for women and men in the public health system more rigidly than the law itself. The most common incorrect interpretation of the law applied in some places refers to the criteria of "at least 25 years of age *or* having two living children." In some places the word "*or*" is replaced by "*and*." This adaptation is made because physicians explicitly state that very young women are being sterilized and rates of regret are very high, although the literature does not fully support this hypothesis (Hardy *et al.*, 1996; Vieira and Ford, 1996). In other cases, the municipal regulation provides a higher age and a higher number of living children. In addition, some criteria that do not exist in the law are included, such as socio-economic condition and conjugal stability.

The family planning protocol in Curitiba specifically states that female sterilization is permitted for women at least 25 years of age who have two living children. In Curitiba, male sterilization is even more restrictive, as men must be at least 30 years of age, have three or more children, and have had no known genital disease. Additionally, the youngest child, for both women and men, must be at least one year of age. According to some health professionals, the basis for these restrictions is to establish priorities for selecting individuals for sterilization, since the number of surgeries performed monthly is determined by quotas, and these are insufficient to address the high demand.

In São Paulo, although local regulations contain no explicit discrepancies with the law, implicit differences can be seen in the norms. The municipal health services in São Paulo use a ranking procedure to select and give priority to approvals for sterilization. Individuals under the age of 30 who have fewer than three children are unable to acquire the minimum of five points needed for approval. The state services do not follow the same ranking procedure and there is no written protocol in effect but, according to the interviews, the requirements of being 30 years old and having three or more children are also applied at the state hospitals.

A municipal law has been in effect in Belo Horizonte since 1994 that is stricter than the federal law regarding the minimum age criterion. Both men and women must be at least 30 years old in order to obtain approval for voluntary sterilization. The greatest difficulty in Belo Horizonte is the availability of hospital beds, which are needed before surgery can be scheduled.

As mentioned above, Recife, Cuiabá, and Palmas have no municipal regulations for voluntary sterilization, but the criteria followed for performing sterilization, at least in the discourse of health professionals, were those stated in the federal law, although the latter are sometimes misinterpreted and include criteria not found in the law, such as socio-economic status and conjugal stability. Finally, it is important to mention that during the fieldwork in Palmas, the municipal secretary of health had eliminated the practice of voluntary sterilization paid for by the Unified System, alleging that candidates to public office could possibly "trade off" surgeries for votes during election years.

4.2.2. The sample

The data in Table 9 show that 67.1, 71.9 and 70.4%, respectively, of pregnant women, non-pregnant women, and men who requested surgical sterilization did so by first contacting outpatient services affiliated with the Unified Health System (SUS). The rest of the demand was addressed to outpatient services annexed to hospitals.

As can be seen in Table 9, the great majority of pregnant women who were seeking sterilization at the public health system were between ages 25 and 34, married, and Catholic. Regarding skin color, the sample is about half black and half non-black. They have low schooling levels and low monthly family per capita income. Most had not completed eight years of schooling and were earning less than R$ 81.00 (US$ 35.00) per month.

The sample of non-pregnant women was comprised of 53.4% Afro-Brazilians, 63.64% being in the 25-34 age bracket; 77.3% were married or living in stable unions, 97.73% had two or more living children, 62.5% declared they were Catholic, and 54.5% had not completed eight years of schooling. The majority of the men were also Afro-Brazilian (50.7%), but older, 52.1% being age 35 or over. Almost all were married or in stable unions (95.8%), 90.1% had two or more

Table 9
Sample composition of females and males who requested sterilization, according to socio-demographic variables

Variable	Pregnant women (76)	Non-pregnant women (88)	Men (71)
Age (in years)			
≤ 24	18.42	15.91	4.23
25-34	69.74	63.64	43.66
35 or older	11.84	20.45	52.11
Total	100.00	100.00	100.00
Color/Race			
White	35.53	37.5	45.1
Black	55.26	53.4	50.7
Other	9.21	9.1	4.2
Total	100.00	100.0	100.0
Years of schooling			
0-3	11.84	12.5	7.0
4-7	48.68	42.0	26.8
8 or more	39.47	45.5	66.2
Total	100.00	100.0	100.0
Marital status			
Married	92.10	77.3	95.8
Unmarried	7.89	22.7	4.2
Total	100.00	100.0	100.0
Per capita monthly family income (in Reais)			
≤ 40	22.37	39.8	9.9
41-80	34.21	27.3	15.5
81 or over	43.42	32.9	74.6
Total	100.00	100.0	100.0
Religion			
Catholic	60.53	62.5	56.3
Other	39.47	37.5	43.7
Total	100.00	100.0	100.0
Number of live births			
≤ 1	19.74	2.27	9.86
2 or more	80.26	97.73	90.14
Total	100.00	100.00	100.00
Type of health service			
Outpatient	67.11	71.9	70.4
Outpatient in hospital	32.89	28.1	29.6
Total	100.00	100.0	100.0

children, 33.8% had not completed primary school (eight years of schooling), and 56.3% were Catholic.

It should be noted that the men had a higher per capita monthly family income than the women, with 74.6% being in the bracket of over R$ 81 (US$ 35), a level attained by 43.4% of the pregnant women and only 32.9% of the non-pregnant women. In addition, and related to the previous observation, the men in the sample of individuals seeking voluntary sterilization in the public health system had more years of education and were older than both pregnant and non-pregnant women.

This particular sample also indicates that about 20% of the pregnant women have one child, or no children, very different from the parity among non-pregnant women and men. This fact was to be expected since, as mentioned above, women in Brazil are often sterilized during deliveries by Caesarean section. Hence, during the pregnancy with their second child, women usually request for sterilization during delivery, and are often able to obtain it, even though this is illegal.

Some differences can be seen in this composition, by age and by number of children born alive, of the samples of pregnant women, non-pregnant women, and men who requested surgical sterilization, as shown in Tables 10a, 10b, and 10c, respectively. The women between the ages of 25 and 34 with two or more children predominate in the women's samples (59.2% for pregnant and 62.5% for non-pregnant), whereas the most frequent segment of men, corresponding to 46.5% of the total, were age 35 or older and had two or more children.

Another interesting fact gathered during the first interviews with the applicants referred to their current use of contraceptive methods, since almost one fourth of all the women did not use any method to avoid conception (Table 11). The pill was being taken by 30.7% of the women, followed by condoms used by their partners (25.0%). Injectable contraceptives were in third place, with 10.2%. The major users of oral contraceptives in this sample were pregnant women (55.3%). The proportion of men who were using no contraceptive method was even higher than of women (36.6%), reaching 39.5% if one includes two cases of men whose partners had had tubal ligations. Among men, the condom is the most frequently used method, by 32.4%, followed by the pill used by the men's partners (23.9%). It should also be noted that 98.7% of the respondents were aware that tubal ligations might be irreversible.

Table 10
Composition of the individuals who requested sterilization, according to age and number of children, by type of interviewees

Age	Number of children		
	≤ 1	2 or +	Total
(a) Pregnant women			
Up to 24	5.26	13.16	-
25-34	10.53	59.21	-
35 or over	3.95	7.89	-
Total	--	-	100.0 (76)
(b) Non-pregnant women			
Up to 24	0.0	15.9	-
25-34	1.1	62.5	-
35 or over	1.0	19.3	-
Total	--	-	100.0 (88)
(c) Men			
Up to 24	0.0	4.2	-
25-34	4.2	39.4	-
35 or over	5.6	46.5	-
Total	-	-	100.0 (71)

Table 11
Use of contraceptives by females and males at first interview

Method	Pregnant women[a]	Non-pregnant women	Men
Oral contraceptives	55.3	30.7	23.9
Condoms	6.6	25.0	32.4
Injectable	6.6	10.2	-
IUD	3.9	6.8	-
Ogino-Knauss	0.0	2.3	-
Coitus interruptus	0.0	1.1	4.2
Others	1.3	0.0	-
None	26.3	23.9	39.5
Total	100.0	100.0	100.0

a. Method used before current pregnancy.

Table 12
Percentage of sterilized females and males
according to socio-demographic variables

Variables	% sterilized		
	Pregnant women	Non-pregnant women	Men
Age (in years)			
≤ 24	35.7	21.4	0.0
25-34	49.1	26.8	22.6
35 or older	66.7	27.8	40.5
Color/Race			
White	62.0	21.2	46.9
Non-White	40.8	29.1	17.9
Years of schooling			
0-3	44.4	27.3	38.3
4-7	48.6	24.3	15.8
8 or more	50.0	27.5	20.0
Marital status			
Married	51.8	26.5	26.9
Unmarried	44.2	25.0	33.3
Per capita monthly family income (in Reais)			
≤ 40	47.1	25.7	0.0
41-80	50.0	29.2	27.3
81 or over	48.5	24.1	35.8
Religion			
Catholic	45.6	25.5	32.5
Other	53.3	27.3	29.0
Number of live births			
≤ 1	53.3	-	14.3
2 or more	47.5	25.6	32.8
Type of health service			
Outpatient	45.1	22.2	28.0
Outpatient in hospital	56.0	36.0	38.1
Total	48.7	26.1	31.0

4.2.3. Fulfilled requests

After a follow-up of approximately six months, only 26.1% of the non-pregnant women who applied for sterilization had been successful. Among males this percentage reached 31.0% (Table 12). The highest percentage was among pregnant women, 48.7% of whom managed to obtain sterilization via SUS, mostly associated with C-sections. These proportions were higher for those who had entered the Public Health System through hospital outpatient services: 56.0% for pregnant, 36.0% for non-pregnant, and 38.1% for males. One reason for this difference may be the fact that entering through other outpatient services involves more bureaucracy.

Table 12 also shows that the chances of non-pregnant females being sterilized do not vary according to age, race, years of schooling, income, marital status, number of live births, or religion. For males, however, the situation is quite different. The percentage of sterilized men is higher among whites, among unmarried and older men, among

Table 13
Demand for sterilization and number (percentage) of individuals sterilized, according to age and number of live births, by type of interviewees

Age (in years)	Number of live births			
	≤ 1		2 or more	
	Demand	Sterilized	Demand	Sterilized
	(a) Pregnant women			
≤ 24	4	2	10	3 (30.0%)
25-34	8	4	45	22 (48.9%)
35 +	3	2	6	4 (66.7%)
	(b) Men			
≤ 24	0	0	3	0
25-34	3	0	28	7 (25.0%)
35 +	4	1	33	14 (42.4%)
	(c) Non-pregnant women			
≤ 24	0	1	14	3 (21.4%)
25-34	1	1	55	15 (27.3%)
35 +	1	1	17	4 (23.5%)

those with less schooling, those with higher income, and those with two or more children. Pregnant women's chances of obtaining sterilization are fewer than those of men and follow the same pattern between the categories of some variables; however, opposed to men, more educated, married, and non-Catholic women have better chances of obtaining the requested surgery at SUS.

When age and number of live births are combined, we can observe that having more children and being older gives men and pregnant women better chances of obtaining sterilization, although the demand for sterilization among persons with one or no children is low, even among the oldest. It should be noted that very few users under age 25 were able to access sterilization at SUS. Finally, the best chances of being sterilized were for pregnant women and for men with two or more children and age 35 or older.

4.2.4. Counseling

Pursuant to Sole Paragraph of Article 14 of Law No. 9263, of January 1996, "only those institutions which offer all options of means and methods of reversible contraception may be authorized to perform surgical sterilization." In this regard, men and women who applied for surgical sterilization were asked if they had participated in counseling sessions which informed them of all the types of methods available for avoiding pregnancy before the final decision was made to terminate their reproductive cycle. The results (Table 14) show that 73.9% of the non-pregnant women and 71.8% of the men responded that they were informed of all available contraceptive methods. However, only half of

Table 14
Exposure to all contraceptive methods during counseling to those applying for sterilization

Counseling	Pregnant women (76)	Non-pregnant women (88)	Men (71)
Yes	50.0	73.9	71.8
No	36.8	13.6	22.5
No answer	13.2	12.5	5.6
Total	100.0	100.0	100.0

the pregnant women had received counseling on contraceptive methods. This may be so because some of the pregnant women entered the system through physicians' offices and not from the outpatient services, as did all the males and non-pregnant females.

These findings may be reflecting the fact that the great majority (97.0%) of the directors of hospitals and outpatient services, which establishments are the entrance gates to the Unified Health System for requesting surgical sterilization in this study, expressed agreement with this requirement of the law. It should also be stressed that there was no statistical difference between the percentages of who obtained sterilization among those who received counseling and those who did not. In fact, these percentages for the non-pregnant women were 26.1% and 33.3%, respectively, of the sterilizations performed. For the men, results were 29.4% and 31.2%; and for pregnant women they were 52.6 and 46.4%.

4.2.5. Safe sex after sterilization

Respondents already sterilized were asked how they intend to guarantee safe sexual practices that will prevent STD and HIV/AIDS. The answers to this question can be found in Table 15, where six out of ten of the vasectomized men gave replies based on the fidelity of their wives or partners, without describing their own behavior in terms of safe sex in cases of occasional relationships. Women (pregnant and not) are more attentive than men regarding the use of condoms, but in this case as well, a high percentage will trust their partners.

Table 15
Sexual behavior among sterilized males and females
to prevent STD and HIV/AIDS

Intended behavior	Pregnant women (37)	Non-pregnant Women (23)	Men (22)
Use condoms	37.8	43.5	31.8
Do nothing because trust stable partner	37.8	39.1	59.1
Do not know	8.1	13.0	0.0
Did not answer	16.2	4.3	9.1
Total	100.0	100.0	100.0

These findings show that family planning services, in association with STD/Aids prevention programs, must take into account the vulnerability of sterilized persons, who receive very limited information and follow-up after surgery.

4.3. Reproductive rights and compliance with the law

The interviews held with directors of hospitals and clinics as to the suitability or not of the criteria set down by Law 9263 for performing voluntary sterilizations varied according to the requirement being judged (Table 16). For the hospital directors, the criterion of minimum age was considered the most inadequate, followed by the minimum number of children born alive. According to them, people should be older or have had more children.

Table 16
Percentage of divergence expressed by persons responsible for reproductive health at state and municipal level, and directors of hospitals and clinics

Criteria set down by Law 9263 for obtaining voluntary sterilization	State managers	Municipal managers	Hospital directors	Clinic directors
Age 25	50.0	67.0	71.0	34.0
Two living children	17.0	33.0	46.0	15.0
Spouse's consent	50.0	33.0	17.0	18.0
Court authorization	33.0	33.0	18.0	22.0
Not simultaneous with child birth /miscarriage/abortion or puerperal period	16.0	33.0	39.0	26.0
60-day waiting period	17.0	17.0	29.0	42.0
Counseling service	0	0	3.0	3.0
Informed consent	0	0	3.0	3.0
Risk of life to mother and fetus	0	0	3.0	3.0
Number of cases	6	6	28	31

Especially the clinic directors considered the 60-day waiting period between first application and surgery too long. State and municipal health managers endorsed the objection to the minimum age of 25.

This fact helps explain the low proportion of surgical sterilizations, especially of non-pregnant women and men, registered in the survey after six months of follow-up. On the one hand, the law brought about some standardization in practices and halted abuse, within a legitimate perspective of reproductive rights. On the other hand, the conservative reactions of health professionals, allied to SUS bureaucracy, are making the exercise of this right more difficult.

When one notes that only 66.4% of the applicants for sterilization were aware of their right to be sterilized free of charge by the Public Health System, according to the criteria established by law, one can easily imagine the margin of maneuver the health professionals have.

The reasons alleged by women, pregnant and not, and men for not having been sterilized after an average waiting period of 6 months are shown on Table 17, and reinforce the observations made above. In fact, the great majority encountered difficulties in the Public Health System (47.2% of the pregnant women, 54.8% of the non-pregnant women and 41.7% of the men).

Table 17
Alleged reasons for not having been sterilized, by type of interviewees

Alleged reasons	Not sterilized		
	Pregnant women (36) [a]	Non-pregnant women (62) [b]	Men (48) [c]
Couldn't get sterilization at SUS	47.2	54.8	41.7
On the waiting list at SUS	19.4	12.9	20.8
Gave up	11.1	14.5	25.0
Got pregnant	0.0	8.1	-
Other reasons	22.2	9.6	12.5
Total	100.0	100.0	100.0

a. Two of the 38 women not sterilized did not respond the last interview.
b. Four of the 66 women not sterilized failed to respond.
c. One of the 49 men not sterilized failed to respond.

Those who had applied for sterilization at SUS and had not been successful were asked why this was the case. The most frequent answers given by the pregnant women were:

- Bureaucracy of the system, too many papers to go after and sign;
- The user was too young;
- Shortage of SUS financial resources (few surgeries each month);
- Risk of life to undergo surgery.

The difficulties alleged by the non-pregnant women, where the first two explanations below accounted for 76.4% among the difficulties mentioned, include:

- Hard to apply for, not enough doctors, ill will;
- Bureaucracy of the system causes long waiting periods;
- SUS does not respect the criterion of age or number of living children;
- Is a single woman, no one to sign for her;
- Doctor said she would regret it later;
- Doctor at the health system wanted to charge the patient;
- Doctor did not recommend because the patient has high blood pressure or some other health problem.

Although only four pregnant women decided not to go through with the surgery, the reasons they gave are illustrative of the problems involved:

- Delay in getting surgery (waiting to have the baby and then two more months);
- The doctor would perform the tubal ligation only if there was risk at delivery;
- Because the woman is breastfeeding and has no one to take care of the baby;
- Has diabetes and the husband will get a vasectomy.

The reasons the non-pregnant women mentioned for giving up were:

- Fear of regretting it later;
- Decided to use an IUD;
- Decided she was too young;
- Entered menopause;

- Husband wouldn't sign the release papers;
- Had an accident;
- Decided to go to a private hospital.

"Other reasons" included not having an ID Card, not yet having a birth certificate for the last child, separation, lost the baby, the politician who was helping lost the election, lack of documentation during delivery, and having succeeded in getting it somewhere else.

The men who were unable to obtain a vasectomy from the Public Health System gave the following reasons:

- Bureaucracy at the public health center, long lines, etc.;
- The health system does not respect the criterion of age or the number of living children;
- Doctor said I might regret it;
- SUS doesn't sterilize free of charge;
- Doctor did not recommend because I have high cholesterol;
- Surgeries were temporarily cancelled.

The first two accounted for 80% of the complaints regarding the service received from the Public Health System.

The main reasons that led men to decide against having a vasectomy were the following:

- Regretting the decision;
- Wife got a tubal ligation;
- Wife uses other method;
- Decided he was too young;
- Didn't go on the scheduled date;
- Health problems;
- Was too old.

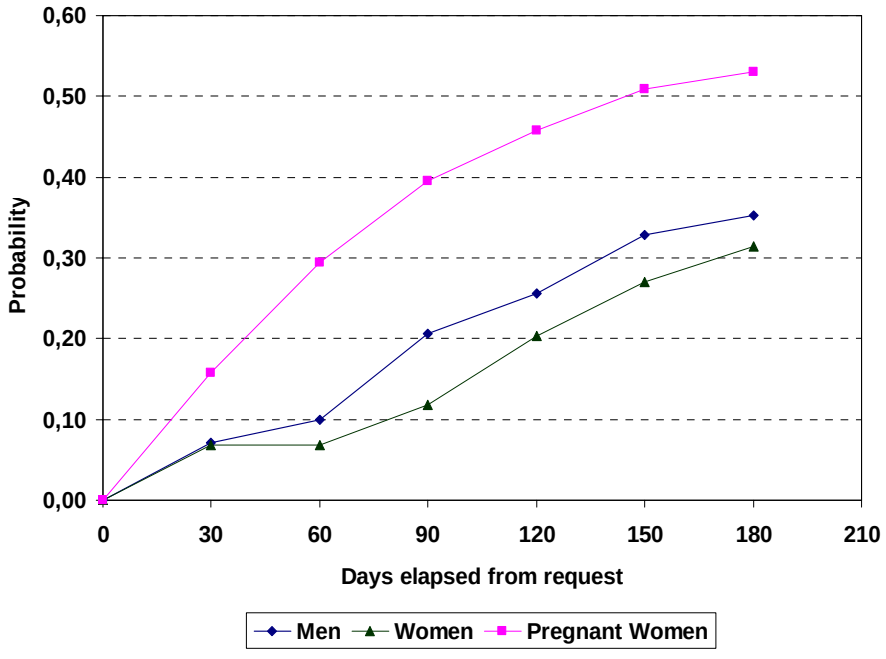
4.4. The waiting period for sterilization

Models of life tables of the waiting time for sterilization were compared with all the variables shown in Table 1. The majority shows that there were no significant statistical differences in the waiting period for obtaining sterilization among the categories of these variables.

For example, there are no significant differences between whites and blacks on time elapsed between application and surgery. This is true for all age groups, educational levels, marital status, per capita income, religion, and number of live births.

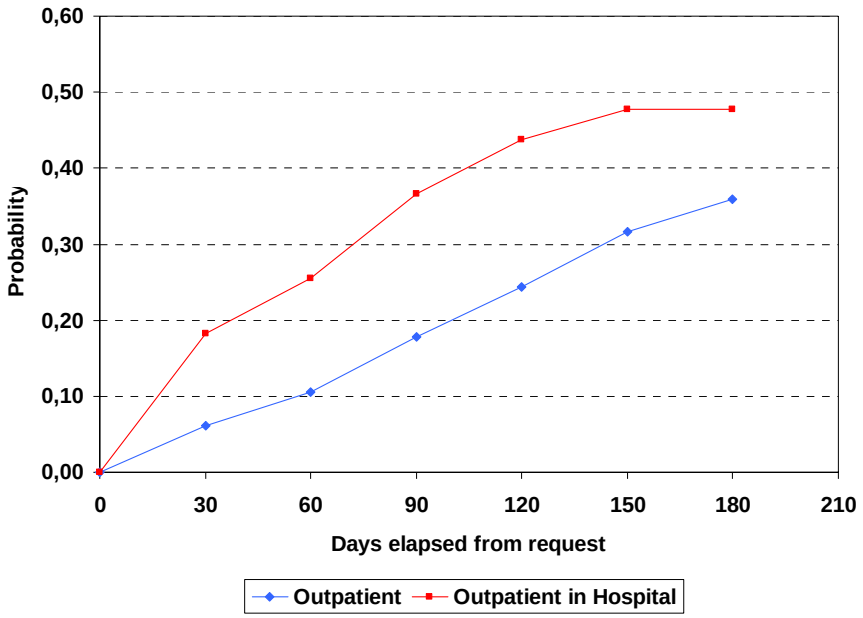
Comparing the three strata of interviewees, there are statistically significant differences in the waiting time for sterilization (Table A in appendix II), although the difference is due to the very distinct behavior of pregnant women in contrast to the others (Graph 1). We can observe that pregnant women have better chances of obtaining sterilization during the entire period of observation. Men show higher probabilities of obtaining sterilization than non-pregnant women, although the time elapsed between application and performance of the surgery presents no major (statistically significant) variations over the six-month period when comparing the curve for these two groups.

Graph 1
Probability of obtaining voluntary sterilization at public health facilities (SUS) according to user category



There is a probability for all users to obtain sterilization, even during the first month after requesting, but it is greater for pregnant women, whereas during the second month, no non-pregnant women obtained sterilization, although some men and several pregnant women were successful. This may illustrate two different aspects of the legislation: one is that the law has not been strictly complied with for all users, some obtaining sterilization very shortly after requesting; secondly it seems apparent that the law does not apply as strictly to pregnant women as it does to men, and to men less strictly than to non-pregnant women.

Graph 2
Probability of obtaining voluntary sterilization at public health facilities (SUS) during a follow-up of approximately six months, according to type of health facility

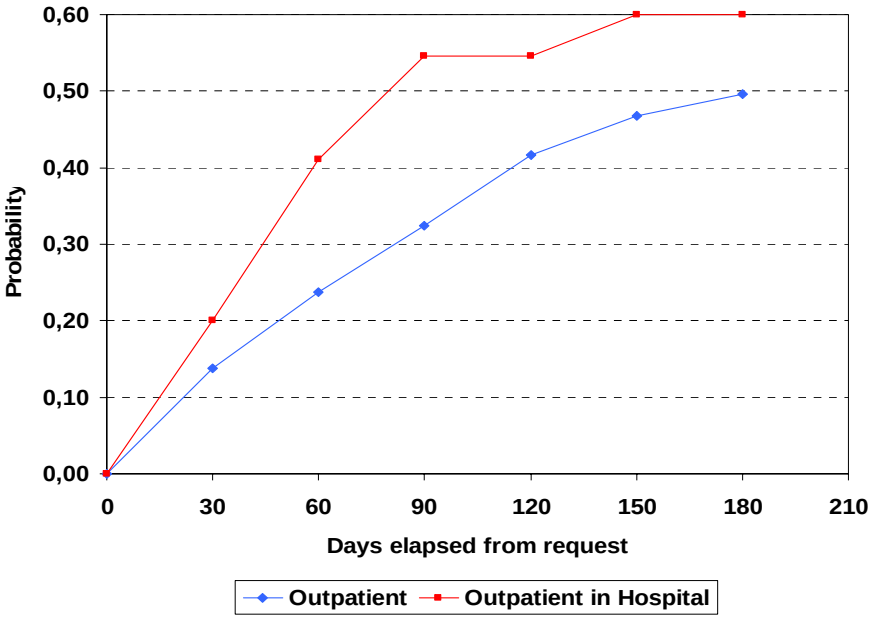


Different types of health services showed considerable and significant differences in the waiting period for sterilization (at 99% level of confidence by the Wilcoxon Test and by the Log-Rank Test: Appendix II Table B). Graph 2 shows that users who applied for sterilization at a hospital-related outpatient service had to wait much less time for their

surgery than those who went to an outpatient clinic not located near a hospital. Both types of outpatient clinics sterilized some users before the 60-day waiting period, but this occurred much more frequently at hospital-related outpatient services. As was mentioned at the beginning of this paper, the public health system in some cities is still not organized in the reproductive area. It is therefore more likely that waiting periods of less than 60 days between application and sterilization occur in such places.

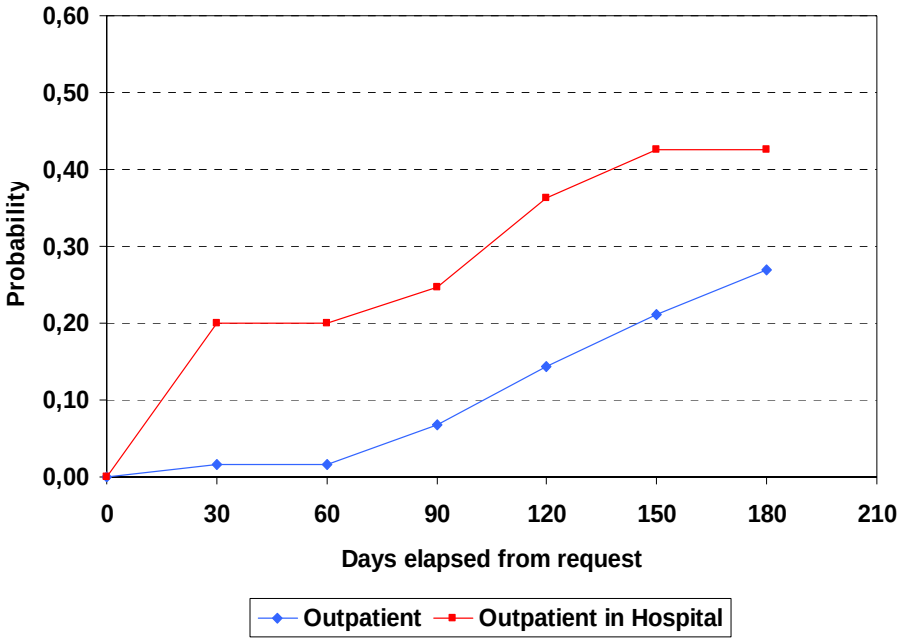
Another important difference between these two types of service is that, besides waiting much less time than those who go to independent outpatient clinics, individuals who seek sterilization at hospital-related outpatient services also have much better chances of success. This may result in a great disadvantage to persons living in municipalities where no hospitals are available, meaning the majority of the municipalities in the country.

Graph 3
Probability of pregnant women obtaining voluntary sterilization at public health facilities (SUS) during a follow-up of approximately six months, according to type of health facility

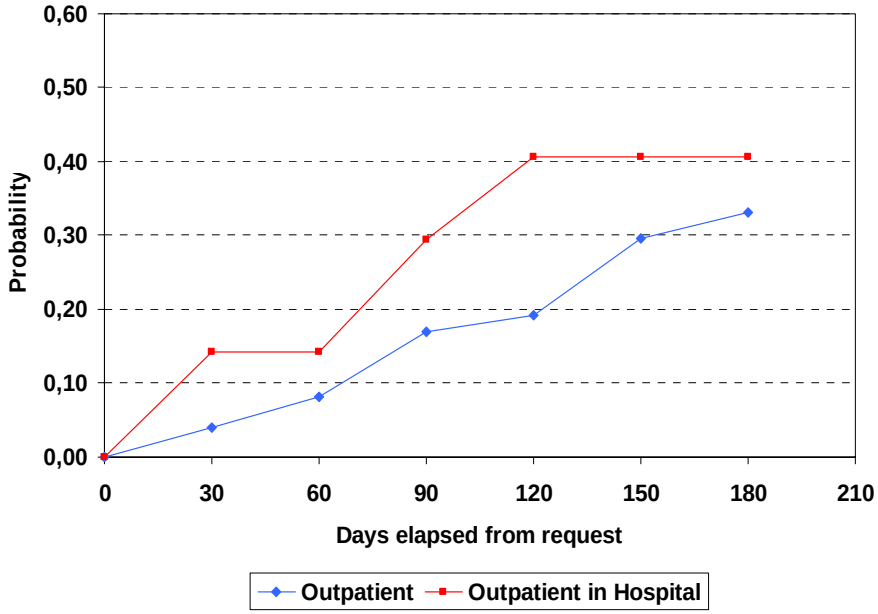


Finally, a very important difference can be seen in the lengths of waiting period to obtain female and male sterilizations in the two types of health services (Graphs 3, 4 and 5) if we observe each interview strata separately. The model for sterilization among non-pregnant women shows a statistically significant difference between the two types of service (at 98% level of confidence by the Wilcoxon Test and 94% by the Log-Rank Test: Appendix II, Table D, Graph 4), whereas male sterilization and sterilization for pregnant women show no such broad differences. On one hand, this may be because vasectomy is a simpler medical procedure and need not necessarily be performed in a hospital. On the other hand, these results may indicate that distortions in the system still persist where sterilizations are still performed during c-sections, sometimes being an unnecessary surgery.

Graph 4
Probability of non-pregnant women obtaining voluntary sterilization at public health facilities (SUS) during follow-up of approximately six months, according to type of health facility



Graph 5
Probability of men obtaining voluntary sterilization at public health facilities (SUS) during follow-up of approximately six months, by type of health facility



This result indicates once again that there are important gender-related factors regarding voluntary sterilization that must be taken into account when organizing a health system, if better quality and access are to be provided to users.

In view of the considerable numbers of respondents who were not using any method at all, when they applied for sterilization, and continue not using while they are waiting for sterilization, it is important to consider how counseling is functioning during the process of getting voluntary sterilization. The long waiting period and the low proportion of non-pregnant women who are successful in obtaining sterilization indicates the high risk of undesired pregnancies (as was the case of five women during this study). The almost daily expectation that applicants will be called in for surgery may be a cause for many of them to constantly postpone the option for some other method, thus making them even more vulnerable to pregnancy than the general population.

5. Final remarks

As is clear from the situation described above, prior to Law No. 9263, female sterilization appeared as the most common means of contraception, a fact that rated Brazil among the world's highest users of this method. Due to legal restrictions, most of such sterilizations took place on the occasion of a Caesarean section, a fact that consequently contributed to an astonishing growth of Caesarean sections themselves.

In order to have a tubal ligation performed by the public health system, women were required either to undergo an unnecessary Caesarean section or to have the procedure recorded under another code, such as salpingectomy. Since both vasectomy and salpingectomy may be indicated for reasons other than sterilization, there is insufficient information available to indicate what proportion of these cases were used as a means to conceal reality or to get around the legislation in effect.

The terms of the law resulted from a long and detailed debate between women's movements and public health organs, especially the Brazilian Health Ministry. As a result, the Health Ministry eventually began regulating this procedure and reducing abuses, based on a legitimate perspective of respect for women's and men's reproductive rights. Like any law, its capillary course down through the public health system to the population in general takes time, and the experience in its implementation may lead to alterations that will bring it more closely in line with the population's reproductive needs.

Nonetheless, up to the time of the survey, it was still possible to discern a continuation of the practice of female sterilization during c-sections at some research sites, clearly showing that this long-established practice carried out for many years is preventing the correct application of the new legislation on family planning, especially regarding the practice of female sterilization, as the results from the follow-up with pregnant women have shown.

Additionally, most of the other criteria provided by the new legislation, especially concerning age, number of children, and counseling, are not being fully complied with for any of the three groups (men, non-pregnant women, and pregnant women) who apply for voluntary sterilization from the public health system.

The well-known data in Brazil concerning the prevalence of tubal ligation and vasectomy are eloquent regarding the role of women, especially those in stable unions, in regulating fertility and having final control over reproduction.

The most recent data available (PNDS-96) show that only 2.4% of the married men (or those in stable unions) were vasectomized, while 40.3% of the women were sterilized. Additionally, the data show that female sterilization was more widely known by the men (87.7%) than vasectomy itself (72.3%).

Although less frequent, and illegal as a means for sterilization before 1997, vasectomy was already available as a procedure paid for by SUS since 1992. The simple fact of the existence of the code before 1998 indicates the inconsistency of the health system, which paid for male but not female sterilization before legalization.

The present study, whose preliminary results are analyzed here, allows one to note that some gender asymmetry still exists. The following facts are evidence of this assertion:

- ✓ When the decision for sterilization is made, men's requests have better chances of being successful, unless the woman is pregnant;
- ✓ Failure by the public health system to strictly comply with the legal minimum 60-day waiting period between application and surgery, as provided in the law, occurs more often for men than for non-pregnant women;
- ✓ More men than women who gave up waiting for sterilization stated that their motive was the fact that their partner or spouse had been sterilized during the period of the study;
- ✓ Among all individuals who were sterilized, more women than men showed concern with safe sex, regarding the prevention of SDT/AIDS;
- ✓ Controlling for a distortion in the system, where women undergo Caesarean sections in order to obtain sterilization, the fact that a vasectomy can be an outpatient medical procedure performed at health centers results in a shorter waiting period between request and surgery for men than for non-pregnant women, whose tubal ligation must be performed in a hospital.

Federal Decree No. 144, of November 1997, normalized the practice of voluntary female and male sterilization, making it legitimate

among reproductive rights. However, this study clearly shows that both the conservative reaction of health professionals and the typical complex bureaucracy of the Public Health System as a whole are hindering the exercise of women's and men's reproductive rights.

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References

BARROS, F. C., J. P. VAUGHAN, C. G. VICTORIA and S. R. A. HUTTLY (1991), "Epidemic of Caesarean section in Brazil", *The Lance*t, vol. 338, p. 167-169.

BERQUÓ, E. (1993), "Brasil, um caso exemplar (anticoncepção e partos cirúrgicos) à espera de uma ação exemplar", *Estudos Feminista*s, vol. 1, p. 366-381.

BRASIL (1997*a*), *Lei ordinária no 9263, de 12 de janeiro de 1996. Regula o parágrafo 7 do artigo 226 da constituição federal, que trata do planejamento familiar, estabelece penalidades e dá outras providências*, Brasília, *Diário Oficial da União*, August 20, 1997, p. 17989, col. 1.

BRASIL (1997*b*), Ministério da Saúde/Secretaria de Assistência à Saúde, *Decree n. 144, November 20, 1997*, Brasília, *Diário Oficial da União*, November 24, 1997, n. 227, section I, p. 27409.

BRASIL (1999), Ministério da Saúde/Secretaria de Assistência à Saúde, *Decree n. 048, February 11, 1999*, Brasília, *Diário Oficial da União*.

CAETANO, A. J. (2000), *Sterilization for Votes in the Brazilian Northeast: The Case of Pernambuco*, Unpublished Ph. D. thesis, University of Texas at Austin.

Código Brasileiro de Deontologia Médica (1965), Resolução CFM N. 1.154 de 13/04/84, *Diário Oficial da União*, January 11, 1965.

Código Brasileiro de Deontologia Médica (1988), Resolução CFM N. 1.246/88, 08/01/1988, *Diário Oficial da União*, January 26, 1988.

Código Penal Brasileiro (1940), Capítulo II, das Lesões Corporais, Artigo 129.

DATASUS (1992-2001), *Assistência à saúde: procedimentos hospitalares por local de internação* (available at http://www.datasus.gov.br, access on March 2000).

FAÚNDES, A., and J. G. CECATTI (1991), "A operação cesárea no Brasil: Incidência, tendências, causas, conseqüências e propostas de ação", *Cadernos de Saúde Pública,* vol. 7, no. 2, p. 150-173.

FAÚNDES, A., and J. G. CECATTI (1993), "Which policy for Caesarean sections in Brazil? An analysis of trends and consequences", *Health Policy and Planning*, vol. 8, p. 33-42.

HARDY, E., L. BAHAMONDES, M. J. OSIS, R. G. COSTA and A. FAÚNDES (1996), "Risk factors for tubal sterilization. Regret, detectable before surgery", *Contraception*, vol. 54, p. 159-162.

HOPKINS, K. L. (1998), *Under the Knife: Caesarean Section and Female Sterilization in Brazil*, Unpublished Ph. D. thesis, University of Texas at Austin.

PNDS (1997), *Pesquisa Nacional sobre Demografia e Saúde,* BEMFAM (Bem-Estar Familiar no Brasil) and Macro International Inc., Rio de Janeiro.

SAS INSTITUTE Inc. (1999-2000), *Statistical Analysis System: The SAS System for Windows*, Release 8.01.

SOUZA, M. R. (2001), *Uma contribuição ao debate sobre partos cesáreos: Estudo prospectivo no município de São Paulo*, Unpublished Ph. D. thesis, State University of Campinas.

VIEIRA, E. M., and N. J. FORD (1996), "Regret after female sterilization among low-income women in São Paulo, Brazil", *Family Planning Perspectives*, vol. 22, no. 1, p. 32-37.

Appendix I

Vetoed parts of the Law No. 9263 released on August of 1997

THE PRESIDENT OF THE REPUBLIC

I make known that the Federal Congress decrees and I promulgate; Pursuant to Paragraph 5 of Art. 66 of the Federal Constitution, the following vetoed parts of Law No. 9263, of January 12, 1996:

…….

Art. 10 — Voluntary sterilization is allowed only in the following situations:

I - Men and women with full civil capacity at of least twenty-five years of age or having at least two living children, following observation of at least sixty days between the manifestation of will and the surgical act, during which period the interested person shall be provided with access to a fertility regulation service, including multidisciplinary group counseling which shall seek to discourage unduly early sterilization; II - Present or future risk to life or health, stated in a written report and signed by two doctors.

Paragraph 1 - Sterilization may only be performed upon presentation of a signed and authenticated document indicating manifestation of will, after information has been provided regarding the risks of the surgery, possible side effects, difficulty of reversion, and the existing reversible contraception options.

Paragraph 2 - Surgical sterilization may not be performed during periods of childbirth or abortion, except in cases of proven need, due to previous successive Caesarean sections.

Paragraph 3 - The manifestation of will referred to in Paragraph 1 will be invalid if expressed during alterations in the capacity for discernment due to consumption of psychoactive substances, altered emotional states, or temporary or permanent mental incapacity.

Paragraph 4 - Surgical sterilization as a contraceptive method may only be performed through tubal ligation, vasectomy or some other scientifically accepted method. Hysterectomy or ooforectomy may not be performed.

Paragraph 5 - In the case of married couples, sterilization may only be performed with the spouse's express consent.

Paragraph 6 - Surgical sterilization of totally disabled persons may only be performed upon judicial authorization, regulated pursuant to law.

Art. 11 – The Central Office of the Unified Health System must be notified of all surgical sterilizations.

Art. 12 – There may be no individual or collective induction or instigation to the practice of surgical sterilization.

Art. 13 – There may be no demand for a certificate of sterilization or a pregnancy test, for any purpose.

Art. 14 – It is the duty of the Authorities of the Unified Health System to maintain its level of competence and attributions, and to register, inspect, and control the institutions and services that perform activities and research in the area of family planning.

Sole Paragraph - Surgical sterilization may only be performed at those institutions that offer the means for reversible contraceptive methods.

Appendix II

Test of equality over strata according to selected variables

Test	Chi square	DF	Pr >Chi square
	A) By type of interviewees		
Log rank	127,928	2	0.0017
Wilcoxon	165,056	2	0.0003
-2Log (LR)	115,716	2	0.0031
	B) By type of health service		
Log Rank	57,072	1	0.0169
Wilcoxon	85,430	1	0.0035
-2Log (LR)	55,318	1	0.0187
	C) Pregnant women by type of health service		
Log rank	13,436	1	0.2464
Wilcoxon	18,342	1	0.1756
-2Log (LR)	12,220	1	0.269
	D) Non-pregnant women by type of health service		
Log Rank	3.4131	1	0.0647
Wilcoxon	5.8992	1	0.0151
-2Log (LR)	3.1192	1	0.0774
	E) Men by type of health service		
Log rank	0.8824	1	0.3476
Wilcoxon	1.3445	1	0.2462
-2Log (LR)	0.8938	1	0.3445

List of other contributions to the seminar

Élise Chantal AHOVEY (*INSAE, Direction des Études Démographiques, Cotonou, Bénin*) – Besoins non satisfaits en planification familiale au sein du couple : déterminants démographiques et cadre de vie au Bénin.

Irina BADURASHVILI (*Georgian Center of Population Research, Tbilisi, Georgia*) – Reproductive and sexual health status of the Georgian population.

Anne BAKILANA (*School of Economics, University of Cape Town, Cape Town, South Africa*) – Methodological challenges of using male questionnaires from Demographic and Health Surveys.

Maria de Fatima FERNANDO ZACARIAS (*National Institute of Statistics, Maputo, Mozambique*) – Reproductive health and sexual behaviour of adolescents and young people in Mozambique.

Carmen Elisa FLOREZ (*Universidad de los Andes, Bogotá, Colombia*) and **Teresa TONO** (*Centro de Gestión Hospitalaria, Bogotá, Colombia*) – Inequities in health status and use of health services in Colombia: 1990-2000.

R. S. GOYAL (*Indian Institute of Health Management Research, Jaipur, India*) – Meeting unmet information needs on sexual health and safe sex through dialogue.

Al-Haj HAMED (*Social and Human Development Consultative Group, Sudan*) – Fundamentalism and poverty: Implications on reproductive health.

HOANG Ba Thinh (*Center for Gender, Family and Environment in Development, Vietnam*) – Problèmes de santé génésique des populations vivant sur des embarcations au Viêt-nam.

Roger INGHAM (*Centre for Sexual Health, London, UK*) – Dynamic contextual analysis: An approach to mapping and improving understanding of issues relating to young people's sexual and reproductive health in poorer country settings.

Chengye JI (*Institute of Child and Adolescent Health, Peking University Health Sciences Center, Beijing, China*) – Reproductive health education for floating adolescents: Unmet needs of poverty and corresponding strategies, measures and social supports.

Abdellatif LAFARAKH (*CERED, Rabat, Morocco*) – Préférences, comportements et besoins non satisfaits en matière de planification familiale.

Elsa LÓPEZ and **Liliana FINDLING** (*Instituto de Investigaciones Gino Germani, Facultad de Ciencias Sociales, Universidad de Buenos Aires, Buenos Aires, Argentina*) – Women, reproductive health and prevention: Individual practices and public actions.

Arup MAHARATNA (*Gokhale Institute of Politics and Economics, Pune, India*) – On seasonal migration and family planning acceptance: A tale of tribal and low cast groups in rural West Bengal, India.

Nancy MOSS (*Center for AIDS Prevention Studies, University of California, USA*) and **Jason SMITH** (*Family Health International, Research Triangle Park, USA*) – Beyond numbers: Giving the poor and marginalized a voice in reproductive health services - a benefit for all.

Ali MTIRAOUI (*Department of Community Medicine, Faculty of Medicine, Sousse, Tunisia*) and **Nébila GUEDDANA** (*ONFP, Board of the Family and Population, Tunis, Tunisia*) – Promotion de la santé de la reproduction en milieu rural et dans les zones d'ombre.

Kourtoum NACRO (*UNFPA, New York, USA*) – Population, reproductive health, gender and poverty reduction: A conceptual framework.

Amara SOONTHORNDHADA (*Institute for Population and Social Research, Mahidol University, Bangkok, Thailand*) **–** Unmet needs related to risk perception among young commercial sex workers.

Irene M. TAZI-PREVE (*Austrian Academy of Science, Vienna Institute of Demography, Vienna, Austria, and Federal Institute of Population Research, Wiesbaden, Germany*) – Abortion in Europe. Factors influencing women and their behaviour patterns in case of unintended pregnancies.

Malinee WONGSITH (*College of Population Studies, University of Chulalongkorn, Bangkok, Thailand*) – Reproductive health behavior and quality of care among Thai women.

Zelda C. ZABLAN (*Population Institute, University of the Philippines, Quezon City, Philippines*) – Improving the quality of care in FP/RH services in the context of an integrated FP/MCH program.