

## LES FACTEURS SOCIAUX Et ÉCONOMIQUES DE LA SANTÉ <br> DES FEMMES <br> SOCIAL AND <br> ECONOMIC PATTERNING <br> OF HEALTH AMONG WOMEN

# SOCIAL AND ECONOMIC PATTERNING OF HEALTH AMONG WOMEN 

## LES FACTEURS SOCIAUX ET ECONOMIQUES DE LA SANTE DES FEMMES

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# INTRODUCTION* 

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On January 20-22, 2000, the Committee for International Cooperation in National Research in Demography (CICRED) convened a seminar in Tunis on the "Social and Economic Patterning of Health among Women". Inequalities in women's health has been a neglected research topic both in developed and developing countries, and the seminar addressed both current substantive research and on theoretical and policy issues.

This volume assembles most of the contributions to this meeting, which was organized in collaboration with the National Office of Family and Population (ONFP) in Tunisia and with financial support from the United Nations Population Fund (UNFPA). Of the eighteen pa-

[^0]pers, twelve have already been published together as a special issue of the periodical Social Science and Medicine (Volume 54, Number 5, March 2002), and each of the papers is included in this volume in its original language ( 3 in French, 15 in English). The contributions are international in scope, drawn from a range of countries, and multi-disciplinary in origin, including papers from geographers, sociologists, social psychologists, demographers and epidemiologists.

Until the late 1980s, most research focused on inequalities in men's mortality and morbidity according to occupational class, with less attention paid to inequalities in health among women (Townsend and Davidson, 1982; Drever and Whitehead, 1997). Since then research has examined whether structural factors, such as social class and material disadvantage, are associated in a similar way with women's and men's health (Arber 1991, 1997; Arber and Cooper, 2000; Bartley et al., 1992; Macran et al., 1994, 1996; Lahelma and Rahkonen, 1997). These researchers have stressed the importance of examining women's health, both in terms of their structural position within society and their family roles.

Within the broad tradition of research on inequalities in health, occupation-based social position has been the prominent factor related to the health of men, whereas for women, a role framework, relating to women's marital and parental role, as well as to their participation in paid employment, has been dominant. The papers in this volume integrate these two approaches, and consider the impact of multiple roles on women's health, and how this varies according to women's class position and their financial and material resources. A particular concern is how poverty, disdvantaged paid work and roles in unpaid work influence women's health. For example, women who live alone or as a lone parent may be vulnerable to living in poverty and have particularly poor health. It is also important to understand how women's earlier biography, in terms of their role in reproduction and production, impacts on their health later in the life course, and to what extent patterns of women's health vary across the life course, since different generations of women may have grown up in very different social and economic circumstances.

During this century there have been radical changes in actual and expected gender roles, especially for women. We may therefore expect the nature of inequalities in health for men and women to vary over time within any one society, as well as to vary among societies. Women
have entered the paid labour force in increasing numbers and most women in developed societies remain in the role of full-time housewife for only a few years when their children are young (McRae, 1999; Rake, 2000; Ginn et al., 2001). However, women's attachment to the labour market tends to be weaker than men's often with high levels of parttime working during the childrearing phase. In many countries, there has been a growth of equal opportunities for women and women have gained greater financial independence, although women and men still usually occupy different structural locations within society; with persistent patterns of occupational sex segregation, and women have lower earnings (Rake, 2000). Women on average have less power, status and financial resources than men, as well as less autonomy and independence (Doyal, 1995).

Occupational class may be a less discriminating indicator of health inequalities for women than men because of women's more fragmented employment career, while educational qualifications may capture comparable or greater inequalities for women than men (Arber, 1997; Arber and Cooper, 2000). In the early years of the twenty-first century, fewer people remain in the same occupation for life, and an individual's occupational class is more likely to change over time. There may therefore be advantages in using socio-economic measures other than occupational class which can be applied to all adults and are more stable throughout the life course, such as educational qualifications. However, there are cohort differences in the level and meaning of educational qualifications, with younger age cohorts much more likely to have higher qualifications, such as a degree, than older cohorts (particularly amongst women). Financial and material resources of the household are closely tied to success in the labour market, although appropriate indicators of financial and material resources will vary between countries. Such resources are influenced by state policies, for example eligibility for and level of welfare benefits. The nature of welfare policies are particularly important for women with children, for example, the availability of subsidised day care, after-school care and the extent of maternity benefits, and especially for women not in the labour market, including lone mothers, who in Britain often rely on state benefits and live close to the poverty level.

Women are more likely to be unpaid carers for family members, providing both domestic labour and health care for partners, children and parents when required. Women also provide the majority of care
for chronically sick children and for older, frail or disabled relatives. Many women perform the 'double shift' of household work and paid labour, so it is important to assess how combining paid and unpaid work affects their health, and how this varies with socio-economic circumstances (Doyal, 1995). Societies vary in the extent to which conventional gender roles circumscribe women's ability to participate in paid work. Papers in this issue are drawn from a number of countries to improve understanding of how women's diverse roles impact on their health in a range of cultural contexts.

Research on women's health until the early 1980s focused primarily on women's roles, examining to what extent additional roles, such as the marital role, parental role and paid employment, had beneficial or adverse consequences for women's health (e.g. Nathanson, 1980; Verbrugge, 1983; Arber et al., 1985). Research on marital status and health (e.g. Verbrugge, 1979; Morgan, 1980; Anson, 1989; Wyke and Ford, 1992) consistently showed that the divorced and separated had poorer health than the married, and that single men but not single women reported poorer health than those who were married. The previous orthodoxy that married women have poorer health than single women may no longer hold in some societies, possibly reflecting changes in the nature of marriage and career opportunities for married women which thirty years ago only existed for single women. Despite the growth in cohabitation over recent years, we know less about the health of cohabitees. In many countries, a major change has been the growth in divorce and the proportion of women bringing up children as lone parents. Thus, there is urgency to research how changes in family structure are associated with health, especially lone parenthood.

These profound structural changes in gender roles in the last quarter of a century across societies lead to the expectation that the pattern of inequalities in health among women and men will also have changed (Annandale and Hunt, 2000). The opening paper by Moss provides a theoretical framework for analysing women's health by examining the twin issues of gender equity and socio-economic inequalities and how these are manifest at the macro level and the micro level of the family and household. She addresses the ways in which the geo-political environment and country-specific factors associated with history, policies, legal rights and institutions interweave to impact on women's health, as well as the impact of community level factors related to social capital, social networks and social support. These considerations lead to an expecta-
tion that the nature of social and economic variations in women's health will vary between societies. Hunt then describes the marked changes in gender roles and relations between women born in Scotland in the early 1930s and twenty years later. The significant changes in the experiences, opportunities and attitudes of different cohorts of women would be expected to influence their health and their health-related behaviour, emphasing the importance of researchers taking into account the social, historical and political context in order to understand the changing nature of the social and economic patterning of women's health. Policy issues delineated in a government report on women's health in Norway are developed by Sundby, who stresses that efforts to reduce gender inequities should be part of future policy making regarding health, and that the very definition of women's health should be widened to include the needs of women in different ages and social layers of society.

Most of the papers are based on large, nationally representative samples, including the 1994 British General Household Survey, coupled with the 1994 Survey on Living Conditions in Finland (Lahelma et al.), the 1996 Survey on the Health Status of the Population of Poland (Wroblewska), the 1998-99 Survey on Divorce in the Netherlands (Fokkema), the 1995 Perinatal Survey in France (Saurel-Cubizolles, Blondel and Kaminski), and the 2000 Survey on Acts of Violence against Women in France (Jaspard, Saurel-Cubizolles and the Enveff team). A number use longitudinal data: the Whitehall II study of Lon-don-based British civil servants (Griffin et al.; Fuhrer and Stansfeld), the 1958 British birth cohort study (Matthews and Power), the 1994 Longitudinal Canadian National Population Health Survey (Walters, McDonough and Strohschein; McDonough, Walters and Strohschein), and the Longitudinal Study in England and Wales (Wiggins et al.). Other papers are based on more regional surveys, such as the West of Scotland Twenty-07 Study (Hunt), the Survey on Gender Relations and Health in two Communities in Jamaica (Henry-Lee, Bailey and Branche), the Mumbai Survey on the Health of Older Women (Raju), and the Socio-Demographic Survey in Rural Tunisia (Gastineau).

Several studies examine the link between women's health and the various dimensions of women's roles: domestic responsibilities, childcare responsibilities, age of youngest child, psychosocial job strain, job insecurity, length of the working week, unsocial working hours, and physical exertion. Further concepts which are operationalized and re-
lated to health, include social support (Walters, McDonough and Strohschein; Fuhrer and Stansfeld), control or decision latitude, extended from the work environment to the home setting (Griffin et al.), gender role orientation (Hunt), gender equity (Sundby; Dikbayir and Karaduman Tas) and gender relations (Henry-Lee, Bailey and Branche), and lastly chronic stress (McDonough, Walters and Strohschein).

Salient findings from papers that address the social and economic patterning of women's bealth include that in the Netherlands having children and a job is the most favorable combination, which holds regardless of the length of the working week once the children are above 5 years, except for divorced mothers who report better health if they have a part-time job (Fokkema). In Poland, higher morbidity is correlated with poor financial condition and poor education (Wroblewska), and the same is found in Mumbai, India (Raju). In Jamaica, acts of violence against women are not on the decrease, as opposed to most types of crime, and this is interpreted in relation to gender identities and male feelings of ill-being (Henry-Lee, Bailey and Branche). Very few data on the health impact of violence against women are available in France, and a national survey on acts of violence against women is presented, which was carried out in 2000 (Jaspard, Saurel-Cubizolles and the Enveff team). Concerning the intermediate factors involved in the patterning of women's health, the combined effects of work and home factors were not found to account for the class gradient in distress in Britain (Matthews and Power), and neither was chronic stress in Canada relevant to the pathways linking social roles to health, with employed women and parents living with children enjoying better health despite greater stress (McDonough, Walters and Strohschein). In France, the social inequalities in terms of prematurity of births and intra-uterine growth retardation remained even after adjusting for the classical risk factors for those conditions, and this is considered as an argument in favor of the role of group-level variables such as social cohesion and networks (Saurel-Cubizolles, Blondel and Kaminski). The importance of the historical frame of women's lives was illustrated with data from Scotland showing substantial changes in gender-related experiences and health between two generations of women 20 years apart in age (Hunt). Similarly, the relevance of the geographical frame was clearly demonstrated with the prevalence of limiting long term illness varying between localities in England and Wales among women with
similar material circumstances (Wiggins et al.). International variations in health patterning among women associated with differing social policies and cultural contexts were also pinpointed, for example, based on Britain and Finland, two countries which differ in the nature of the welfare policies to support child care for working mothers and in the level of paid employment for women (Lahelma et al.). Within Tunisia, health care utilization by women may be hindered by social and cultural barriers, and for this reason health services infrastructure is un-der-utilized in some regions (Gastineau).

Papers focused on explaining gender differences in health, include Walters, McDonough and Strohschein who present little evidence in Canada to support the role of gender disparities in exposure and vulnerability to paid work conditions, household structures and material and personal resources. The position of women in Turkey with regard to the health insurance system is pinpointed, and the ensuing inequalities in terms of access to health services are discussed (Dikbayir and Karaduman Tas).

With regard to gender differences in bealth patterning, the traditional framework ties men's identity more to their role at work, and women's more to their roles at home. However, Griffin et al.'s study of civil servants in London found that low control at home and low control on the job affected the psychological morbidity of both men and women, but in different ways according to their social position. Fuhrer and Stansfeld using the same dataset find that women have a wider range of sources of emotional support than men, but that gender differences in the effects of support on physical and psychological health were attenuated when a support index based on up to four close persons was used as a predictor.

Some of the studies address measurement issues and the appropriateness of indicators. Matthews and Power suggest that it may be that the quality of home factors, and the nature of the experience within a role is more important in explaining the socioeconomic gradient in distress than the number of roles. Lack of detailed knowledge in largescale surveys of conditions in the home and of domestic responsibilities of women and household division of labour is pinpointed (Walters, McDonough and Strohschein). McDonough, Walters and Strohschein suggest that the inability to explain the education and income gradient in women's health by exposure to chronic stress may result from the inability of the stress indicators to capture the essence of the experi-
ences arising from these social locations. The question of whether defining and measuring social support should be gender-specific is investigated, since different experience and sources of emotional support are found for men and women (Fuhrer and Stansfeld).

In the final paper, Strobino et al. examine social policy issues surrounding women's health in the United States. A key policy recommendation for health programs directed at women is to shift away from a narrow focus on pregnancy and the childbearing years to one which emphasises the provision of economic security for women and integrated women's health services throughout the life course. It is therefore important to assess the likely consequences of changes in social policies for women's health in different societies. Policies may be specifically oriented towards women, such as childcare and maternity benefits, which have beneficial effects on women's health, although the magnitude of these effects may vary between women in different so-cio-economic circumstances. Other policies may not specifically be focused on women, but nonetheless have gendered effects. Some may disproportionately advantage women, such as minimum wage legislation since the majority of low earners are women, while others may disproportionately disadvantage women, such as the 'rolling back' of the welfare state over recent years, which has for example reduced the provision of public transport and state-supported care services for older people.

A number of recommendations and research perspectives can be delineated from the papers in this Special Issue. First, it is recommended that future models should incorporate work, home and social position variables for men and women. The concept of control or decision latitude in the home setting needs to be clarified in terms of balance between demands or resources and/or power balance within relationships, and questions should be added in survey questionnaires for a better assessment of home control (Griffin et al.). Studies should be contextualized in historical (Hunt) and geographical (Wiggins et al.) frameworks, and multidisciplinary research is indispensable to integrate social, economic and epidemiological approaches to women's health (Moss). Moreover, qualitative field work using ethnographic techniques would potentially be a very fruitful complement to survey research and analysis.

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# INTRODUCTION* 

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Du 20 au 22 janvier 2000, le Comité International de Coopération dans les Recherches Nationales en Démographie (CICRED) a organisé, à Tunis, un séminaire sur «Les facteurs sociaux et économiques de la santé des femmes». La recherche sur les inégalités en matière de santé des femmes étant très insuffisante, tant dans les pays en développement que dans les pays développés, le séminaire a porté à la fois sur des recherches récentes ou en cours et sur des questions théoriques et politiques.

Ce volume rassemble la plupart des communications présentées lors du séminaire. Celui-ci a été organisé en collaboration avec l'Office National de la Famille et de la Population (ONFP, Tunisie) et avec l'appui financier du Fonds des Nations Unies pour la Population

[^1](FNUAP). Douze des dix-huit textes ont déjà été publiés sous la forme d'un numéro spécial de la revue Social Science and Medicine (vol. 54, n ${ }^{\circ} 5$, mars 2002), et chacun d'entre eux est dans sa langue d'origine (3 en français, 15 en anglais). Ces textes ont une portée internationale et multidisciplinaire, car ils proviennent de nombreux pays différents et leurs auteurs sont des géographes, des sociologues, des psychosociologues, des démographes et des épidémiologistes.

Jusqu'à la fin des années 1980, la plupart des recherches portaient sur les inégalités de mortalité et de morbidité chez les hommes en fonction de leur catégorie professionnelle, et on s'intéressait peu aux inégalités de santé chez les femmes (Townsend et Davidson, 1982 ; Drever et Whitehead, 1997). Depuis lors, des chercheurs ont tenté de déterminer si des facteurs structurels, tels que la classe sociale ou les conditions matérielles de vie, sont associés de manière similaire à la santé des femmes et à celle des hommes (Arber, 1991, 1997 ; Arber et Cooper, 2000 ; Bartley et al., 1992 ; Macran et al., 1994, 1996 ; Lahelma et Rahkonen, 1997). Ils ont mis en avant l'intérêt d'analyser la santé des femmes à la fois en rapport avec leur statut dans la société et avec leurs rôles dans la famille.

Dans la grande tradition des recherches sur les inégalités de santé, la situation sociale fondée sur la profession a été le principal facteur associé à la santé des hommes, tandis que, du côté des femmes, c'est essentiellement la combinaison des rôles qu'elles assument - leurs rôles d'épouse et de mère, mais aussi leur activité économique rémunérée qui a été mise en relation avec leur santé. Les textes de ce volume intègrent ces deux approches ; ils examinent l'impact de la multiplicité des rôles des femmes sur leur santé et analysent les variations de cet impact selon la classe sociale et les ressources financières et matérielles. Une attention particulière est accordée à l'influence de la pauvreté, de l'emploi dévalorisé et du travail non payé sur la santé des femmes. Par exemple, les femmes qui vivent seules ou qui élèvent seules leurs enfants peuvent être particulièrement exposées à la pauvreté et en mauvaise santé. Il est également important de comprendre comment le passé des femmes, en termes d'implication dans la reproduction et la production, influe sur leur santé dans les phases ultérieures de leur vie, et dans quelle mesure la santé des femmes varie le long du cycle de vie, étant donné que des générations féminines différentes peuvent avoir grandi dans des environnements sociaux et économiques extrêmement divers.

Le vingtième siècle a connu des changements radicaux dans les réalités et les espoirs en matière de rôles respectifs des hommes et des femmes - surtout des femmes. On peut donc s'attendre à voir la nature des inégalités de santé, pour les hommes et pour les femmes, évoluer au cours du temps au sein de chaque société et varier d'une société à l'autre. Les femmes ont été de plus en plus nombreuses à accéder au marché du travail, et la plupart d'entre elles, dans les pays développés, ne restent ménagères à temps plein que pendant quelques années, tant que leurs enfants sont en bas âge (McRae, 1999 ; Rake, 2000 ; Ginn et al., 2001). Mais la présence des femmes sur le marché du travail est moins intense que celle des hommes, surtout avec le recours fréquent au travail à temps partiel pendant la phase d'éducation des enfants. Dans beaucoup de pays, l'égalité des chances a progressé et les femmes ont acquis une indépendance financière accrue, bien que, généralement, les hommes et les femmes continuent de se situer différemment dans la société, avec la persistance de discriminations sexuelles en matière d'emploi et de salaire (Rake, 2000). Les femmes ont, en moyenne, un pouvoir, un statut et des ressources financières inférieurs à ceux des hommes ; elles ont aussi moins d'autonomie et d'indépendance (Doyal, 1995).

La catégorie professionnelle est peut-être un indicateur d'inégalité de santé moins pertinent pour les femmes que pour les hommes, parce que la carrière des femmes est plus fragmentée ; en revanche, le niveau d'instruction cristallise autant et même davantage les inégalités chez les femmes que chez les hommes (Arber, 1997 ; Arber et Cooper, 2000). À l'aube du vingt-et-unième siècle, de moins en moins de gens gardent le même emploi pendant toute leur vie, et la catégorie professionnelle d'un individu a de plus en plus de chances de varier au fil du temps. Il peut dès lors être utile de recourir à d'autres indicateurs socioéconomiques que la catégorie professionnelle, applicables à tous les adultes et plus stables dans le cycle de vie, tels que le niveau d'instruction. Mais il y a des différences d'échelle et de signification des niveaux d'instruction d'une génération à l'autre: les jeunes générations ont plus de chances que les anciennes d'avoir un niveau d'instruction élevé, avec un diplôme (surtout chez les femmes). Les ressources financières et matérielles du ménage sont étroitement liées à une bonne position sur le marché du travail ; mais les indicateurs pertinents de la situation financière et matérielle diffèrent d'un pays à l'autre. Ces ressources sont influencées par les politiques gouvernementales, par
exemple en ce qui concerne le droit aux allocations sociales et le montant de celles-ci. La nature des politiques de sécurité sociale est tout à fait déterminante pour les femmes qui ont des enfants (entre autres, l'offre de crèches subventionnées, les garderies, le montant des allocations familiales), et c'est particulièrement vrai pour les mères sans emploi et les mères isolées qui, en Grande-Bretagne, vivent souvent de l'aide sociale, à la limite de la pauvreté.

C'est sur les femmes que retombe le plus souvent la charge, non rémunérée, de prendre soin des membres de la famille: assumer les tâches domestiques et, en cas de nécessité, prodiguer des soins de santé au conjoint, aux enfants ou aux parents. Elles assurent la plus grande part de l'assistance aux enfants malades chroniques et aux parents âgés, maladifs ou handicapés. Bien des femmes ont une «double journée» de travail, à la maison et à l'extérieur ; aussi est-il important d'évaluer comment cette combinaison d'un travail rémunéré et d'un travail non payé affecte leur santé, et d'examiner les variations de cet impact en fonction de leur situation socio-économique (Doyal, 1995). La répartition traditionnelle des rôles entre hommes et femmes peut limiter l'accès de celles-ci à des emplois rémunérés, à des degrés variables en fonction des sociétés. Portant sur de nombreux pays, les communications publiées ici améliorent notre connaissance du processus par lequel la diversité des rôles des femmes influe sur leur santé dans un éventail de contextes culturels différents.

Jusqu'au début des années 1980, la recherche sur la santé des femmes était essentiellement axée sur les tôles féminins, analysant dans quelle mesure l'accumulation des rôles - rôle conjugal, rôle maternel et activité économique - avait des effets positifs ou négatifs sur la santé (voir, entre autres, Nathanson, 1980 ; Verbrugge, 1983 ; Arber et al., 1985). Les recherches sur le rapport entre situation matrimoniale et santé (entre autres, Verbrugge, 1979 ; Morgan, 1980 ; Anson, 1989 ; Wyke et Ford, 1992) ont régulièrement montré que les personnes séparées et divorcées avaient une moins bonne santé que les personnes mariées, et que les hommes célibataires, mais pas les femmes célibataires, se déclaraient en moins bonne santé que les mariés. Le vieux dogme selon lequel la femme mariée a une moins bonne santé que sa consœur célibataire pourrait ne plus être vérifié dans certaines sociétés, du fait que la nature du mariage a évolué et que les femmes mariées ont accès à des possibilités de carrière professionnelle qui, il y a trente ans, étaient l'apanage des femmes célibataires. Malgré le développement de
la cohabitation, ces dernières années, nous savons peu de chose sur la santé des cohabitants. Dans beaucoup de pays, la montée du divorce a constitué une grande mutation, ainsi que la croissance du nombre de femmes qui élèvent seules leurs enfants. Il est donc urgent de développer la recherche sur les rapports entre la santé et les modifications de la structure familiale, en particulier l'extension des familles monoparentales.

Ces grands changements structurels des rôles respectifs des hommes et des femmes, qui sont intervenus dans diverses sociétés au cours du dernier quart de siècle, incitent à penser que les inégalités de santé parmi les hommes et les femmes ont, elles aussi, évoluer (Annandale et Hunt, 2000). Le texte introductif de Moss présente un cadre théorique qui permet d'analyser la santé des femmes en traitant à la fois $l^{\prime}$ '(in)égalité des sexes et les inégalités socio-économiques, et en examinant comment elles se manifestent tant au niveau macro qu'au niveau micro de la famille et du ménage. Elle analyse les diverses manières dont l'environnement géo-politique et les spécificités nationales liées à l'histoire, aux politiques, au droit et aux institutions s'entremêlent pour affecter la santé des femmes; elle examine aussi l'impact de facteurs locaux qui relèvent du capital social, des réseaux sociaux et de la solidarité. Ces considérations incitent à penser que la nature des différences sociales et économiques de santé des femmes doit varier d'une société à l'autre. Hunt fait état des grands changements survenus en Écosse, en termes de répartition des rôles entre hommes et femmes et de relations entre sexes, des générations féminines nées au début des années 1930 à celles qui ont vingt ans de moins. La forte évolution du vécu, des perspectives et des attitudes d'une génération à l'autre devrait avoir eu des effets sur leur santé et sur leurs comportements en matière de santé, ce qui renforce l'intérêt qu'ont les chercheurs à prendre en compte le contexte social, historique et politique pour comprendre la nature évolutive des facteurs sociaux et économiques de la santé des femmes. Les aspects politiques décrits dans un rapport gouvernemental sur la santé des femmes en Norvège sont développés par Sundby, qui souligne que les projets de politiques de santé devraient inclure des efforts de réduction des inégalités entre sexes, et que la définition même de la santé féminine devrait être élargie afin d'englober les besoins des femmes des différents âges et des différentes strates de la société.

La plupart des communications s'appuient sur de grands échantillons représentatifs nationaux : l'Enquête Générale sur les Ménages en

Grande-Bretagne, de 1994, associée à l'Enquête sur les Conditions de Vie en Finlande, de la même année (Lahelma et al.), l'Enquête de 1996 sur la Santé de la Population en Pologne (Wroblewska), l'Enquête de 1998-1999 sur le Divorce aux Pays-Bas (Fokkema), l'Enquête Périnatale française de 1995 (Saurel-Cubizolles, Blondel et Kaminski), et l'Enquête de 2000 sur les Violences envers les Femmes en France (Jaspard, Saurel-Cubizolles et l'équipe Enveff). Plusieurs recourent à des données longitudinales : l'Étude «Whitehall-II» sur les fonctionnaires londoniens (communications de Griffin et al. et de Fuhrer et Stansfeld), l'Étude de la Génération Britannique 1958 (Matthews et Power), l'Enquête Nationale Longitudinale de 1994 sur la Santé de la Population Canadienne (Walters, McDonough et Strohschein ; McDonough, Walters et Strohschein), et l'Enquête Longitudinale sur l'Angleterre et le pays de Galles (Wiggins et al.). D'autres communications exploitent des études régionales de moindre ampleur, telles l'Étude «Twenty-07» sur l'Ouest de l'Écosse (Hunt), l'Enquête sur les Relations HommesFemmes et la Santé dans deux collectivités jamaïcaines (Henry-Lee, Bailey and Branche), l'Enquête sur la Santé des Femmes Âgées à Mumbai (Raju), et l'Enquête Socio-Démographique en Tunisie Rurale (Gastineau).

Plusieurs travaux portent sur le lien entre la santé des femmes et les diverses dimensions des rôles féminins : charges domestiques, responsabilités maternelles, âge de l'enfant le plus jeune, pression psychosociale au travail, insécurité de l'emploi, durée hebdomadaire du travail, horaires décalés, pénibilité physique. D'autres concepts sont opérationnalisés et mis en relation avec la santé : la solidarité sociale (Walters, McDonough et Strohschein ; Fuhrer et Stansfeld), l'autonomie et le pouvoir de décision, du milieu de travail à la sphère domestique (Griffin et al.), l'attitude en matière de répartition sexuelle des rôles (Hunt), l'égalité des sexes (Sundby, Dikbayir et Karaduman Tas) et les relations hommes-femmes (Henry-Lee, Bailey and Branche), et enfin le stress chronique (McDonough, Walters et Strohschein).

Une première série de résultats concerne directement les facteurs sociaux et économiques de la santé des femmes. Aux Pays-Bas, avoir des enfants et un emploi est la situation la plus favorable, et ceci quelle que soit la durée hebdomadaire du travail pour autant que les enfants aient passé l'âge de 5 ans, à l'exception des mères divorcées qui se déclarent en meilleure santé quand elles travaillent à temps partiel (Fokkema). En Pologne (Wroblewska), ainsi qu’à Mumbai, en Inde (Raju), une forte
morbidité est associée avec une mauvaise situation financière et un faible niveau d'instruction. En Jamaïque, contrairement à la plupart des autres types de crimes, les violences contre les femmes ne sont pas en recul, et ce phénomène est interprété en faisant appel à des facteurs d'identité sexuelle et au sentiment masculin de mal-être (Henry-Lee, Bailey and Branche). Il y a en France très peu de données concernant les effets des violences faites aux femmes sur leur santé ; Jaspard, Sau-rel-Cubizolles et l'équipe Enveff présentent une enquête nationale sur les violences envers les femmes réalisée en 2000 . En ce qui concerne les facteurs intermédiaires inclus dans les déterminants de la santé des femmes, les effets combinés des facteurs liés à l'emploi et des facteurs liés au ménage ne se sont pas révélés capables d'expliquer les différences de souffrance féminine observées entre les classes sociales en Grande-Bretagne (Matthews et Power) ; et le stress chronique ne s'est pas montré plus pertinent, au Canada, pour expliquer les trajectoires qui relient les rôles sociaux à la santé, les femmes qui travaillent et les parents qui ont des enfants à charge ayant une meilleure santé malgré un stress plus intense (McDonough, Walters et Strohschein). En France, les inégalités sociales en matière de prématurité et de retard de croissance intra-utérine subsistent même après contrôle des facteurs de risque habituels de ces phénomènes, et ceci est interprété comme un argument en faveur de l'action de facteurs collectifs tels que la cohésion de groupe et les réseaux sociaux (Saurel-Cubizolles, Blondel et Kaminski). L'importance du cadre historique de la vie des femmes est illustrée par des données écossaises qui montrent, en comparant deux générations féminines espacées de vingt ans, l'évolution considérable du vécu lié au genre et de l'état de santé des femmes (Hunt). De même, la pertinence du cadre géographique est clairement démontrée, en An-gleterre-Galles, par les variations de la prévalence des maladies d'une localité à l'autre, chez des femmes dont la situation matérielle est identique (Wiggins et al.). La diversité internationale en matière de profils de santé des femmes, associée à la variété des politiques sociales et des contextes culturels, a également été mise en valeur, en s'appuyant, par exemple, sur les cas de la Grande-Bretagne et de la Finlande, deux pays qui diffèrent par la nature des politiques sociales en faveur de l'enfant dont la mère travaille et par le taux d'activité des femmes (Lahelma et al.). En Tunisie, des barrières sociales et culturelles peuvent entraver le recours des femmes aux services de santé, et c'est la raison pour la-
quelle les infrastructures sanitaires de certaines régions y sont sousutilisées (Gastineau).

Parmi les communications consacrées à l'explication des différences entre sexes en matière de santé, celle de Walters, McDonough et Strohschein montre que, au Canada, le rôle des disparités entre hommes et femmes en matière de pénibilité et de précarité des conditions de travail, de structure du ménage et de ressources matérielles et personnelles, n'est guère confirmé par l'observation. Dikbayir et Karaduman Tas décrivent la situation des femmes à l'égard du système d'assurancemaladie en Turquie et analysent les inégalités qui en découlent en termes d'accès aux services de santé.

En ce qui concerne les différences hommes-femmes en matière de facteurs explicatifs de la santé, le cadre d'analyse traditionnel relie essentiellement l'identité des hommes à leur rôle au travail et celle des femmes à leur rôle à la maison. Cependant, selon l'étude de Griffin et al., qui porte sur les fonctionnaires londoniens, le manque d'autonomie au travail et à la maison influe sur la morbidité psychologique des hommes comme des femmes, mais de manière différente selon leur situation sociale. En exploitant les mêmes données, Fuhrer et Stansfeld constatent que les femmes ont un plus large éventail de sources de soutien affectif que les hommes, mais ils observent aussi que l'écart entre hommes et femmes en ce qui concerne l'effet de cette aide sur la santé physique et psychologique s'amenuise quand l'indicateur de soutien affectif n'implique pas plus de quatre personnes parmi les proches.

Quelques communications portent sur des problèmes de mesure et sur la pertinence des indicateurs. Selon Matthews et Power, la qualité des facteurs attachés au foyer et la nature de l'exercice d'un rôle donné pourraient être plus déterminantes que le nombre des divers rôles pour expliquer les différences socio-économiques en matière de souffrance. Walters, McDonough et Strohschein soulignent, dans les enquêtes de grande envergure, le manque de données détaillées sur les conditions de vie à la maison, les responsabilités domestiques des femmes et la répartition sexuelle des tâches au sein du ménage. McDonough, Walters et Strohschein estiment que notre incapacité à expliquer les écarts de santé des femmes selon leur niveau d'instruction et de revenu par l'exposition différentielle au risque de stress chronique peut provenir de l'incapacité des indicateurs de stress à saisir la spécificité du vécu propre à ces diverses situations sociales. Fuhrer et Stansfeld examinent la question de savoir si la définition et la mesure de la solidarité ne de-
vraient pas être différenciées selon le sexe, puisque les hommes et les femmes n'ont pas la même expérience ni les mêmes sources de soutien affectif.

Dans la dernière communication, Strobino et al. traitent des questions de politique sociale qui entourent la problématique de la santé des femmes aux Etats-Unis. Leur principale recommandation en matière de programmes de santé féminine est de rompre avec une politique étroitement concentrée sur la grossesse et la phase de procréation, pour adopter une vision plus large qui mette l'accent sur la nécessité de garantir aux femmes la sécurité économique et des services intégrés de santé tout au long de leur cycle de vie. Il est donc important d'évaluer les conséquences possibles de l'évolution des politiques sociales pour la santé des femmes dans les différentes sociétés. Les politiques peuvent être spécifiquement axées sur les femmes, telles les crèches et les allocations de maternité, qui ont des effets bénéfiques sur la santé des femmes, même si l'ampleur de ces effets peut varier en fonction des situations socio-économiques individuelles. D'autres politiques, quoique ne visant pas directement les femmes, peuvent avoir des effets qui les touchent particulièrement. Certaines peuvent avantager considérablement les femmes, telle la législation sur le salaire minimum, étant donné que la majorité des bénéficiaires de bas salaires sont des femmes ; d'autres, en revanche, peuvent les désavantager gravement, tel le mouvement de «reflux» qui affecte les politiques d'aide sociale depuis quelques années et qui a, par exemple, réduit l'offre de transports publics et de services subventionnés d'assistance aux personnes âgées.

Plusieurs recommandations et pistes de recherche peuvent être dégagées des textes qui composent ce numéro spécial. Une première recommandation est que les futurs modèles intègrent des variables relatives au travail, au foyer et à la situation sociale des hommes et des femmes. Le concept d'autonomie ou de pouvoir de décision dans la sphère domestique doit être clarifié en termes d'équilibre entre demandes et ressources et/ou de rapports de pouvoir au sein des couples ; il faudrait ajouter aux questionnaires d'enquêtes des questions permettant de mieux évaluer le degré d'autonomie dans la sphère domestique (Griffin et al.). Les travaux devraient être contextualisés dans des cadres historiques (Hunt) et géographiques (Wiggins et al.). La recherche multidisciplinaire s'impose pour intégrer les approches sociologiques, économiques et épidémiologiques de la santé des femmes (Moss). De plus, des études qualitatives de terrain recourant à des techniques ethnogra-
phiques devraient pouvoir utilement compléter les enquêtes et leur analyse.

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# GENDER EQUITY <br> AND SOCIOECONOMIC INEQUALITY: A FRAMEWORK FOR THE PATTERNING OF WOMEN'S HEALTH* 

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#### Abstract

This paper explores the interrelationship of gender equity and socioconomic inequality and how they affect women's bealth at the macro- (country) and micro- (bousehold and individual) levels. An integrated framework draws theoretical perspectives from both approaches and from public bealth. Determinants of women's bealth in the geopolitical environment include country-specific bistory and geography, policies and services, legal rights, organizations and institutions, and structures that shape gender and economic inequality. Culture, norms and sanctions at the country and community level, and sociodemographic characteristics at the individual level, influence women's productive and reproductive roles in the household and workplace. Social capital, roles, psychosocial stresses and resources, bealth services, and behaviors mediate social, economic and cultural effects on bealth outcomes. Inequality between and within households contributes to the patterning of women's bealth. Within the framework, relationships may vary depending upon women's lifestage and cohort experience. Examples of other relevant theoretical frameworks are discussed. The conclusion suggests strategies to im-


[^2]prove data, influence policy, and extend research to better understand the effect of gender and socioeconomic inequality on women's health.

Keywords: Gender equity, Socioeconomic inequality, Women's health, International development, Policy.

## Résumé

L'auteur examine les interrelations entre l'égalité des sexes et les inégalités socioéconomiques, ainsi que la manière dont elles affectent la santé des femmes, aux niveaux macro (pays) et micro (ménage, individu). Au moyen d'un cadre intégré d'analyse, elle tire des perspectives théoriques de ces deux approches et du champ de la santé publique. Dans la sphère géopolitique, les déterminants de la santé des femmes sont l'bistoire et la géographie particulières du pays, ses politiques, ses services, son droit, ses organisations, ses institutions et les structures qui engendrent les inégalités sexuelles et économiques. Les normes et sanctions culturelles, au niveau des pays et des communautés, et les caractéristiques socio-démographiques, au niveau individuel, influencent les rôles productif et reproductif des femmes dans le ménage et sur le lieu de travail. Les influences sociales, économiques et culturelles sur la santé passent par le capital social, les rôles, les ressources et contraintes psychosociales, les services de santé et les comportements. Les inégalités entre ménages et au sein du ménage jouent un rôle dans la détermination de la santé féminine. Dans le cadre d'analyse retenu, les relationspewvent varier en fonction du vécu des générations et du cycle de vie des femmes. L'auteur examine quelques exemples de cadres théoriques alternatifs. En conclusion, elle suggère différentes stratégies d'amélioration des données, d'infléchissement des politiques et d'élargissement de la recherche, afin que l'on comprenne mieux l'impact des inégalités sexuelles et socioéconomiques sur la santé des femmes.

Mots-clés : Égalité des sexes, Inégalités socioéconomiques, Santé des femmes, Développement international, Politique.

## 1. Introduction

Gender equity and socioeconomic inequality represent two different paradigms for understanding women's health and well-being. They often draw their sources from different disciplines: gender equity from the law, political sciences, development economics and the humanities; and socio-
economic inequality from economics, sociology, epidemiology and public health.

This paper develops a unified model that brings gender equity and socioeconomic inequality together in a common framework. A comprehensive framework should improve our understanding of the social and economic patterning of women's health outcomes and offer new directions for research, interventions, and policy. A criterion for a unified approach is that it should be relevant to women across cultures and nations, while allowing for country-to-country and culturally-specific fine-tuning. The advantage is that researchers can learn something from the gender equity approaches developed particularly for women in less industrialized southern countries, while northern researchers can contribute insights from research on socioeconomic inequalities in health among higher income nations.

## 2. Socioeconomic inequality

Despite unprecedented prosperity in the US, the tentative extension of democratization to many countries worldwide, and rapid economic development of some countries, the gaps in income between the poorest and the richest individuals and countries continue to widen (Smeeding and Gottschalk, 1995). In 1960, 20\% of the world's people had 30 times the income of the poorest $20 \%$. In 1997, the figure was 74 times as much (UNDP, 1999). Countries such as Russia, China, Indonesia, and Thailand that had achieved more equitable income distribution prior to the early 1980s have seen a marked growth in income inequality along with their emerging market economies (UNDP, 1999). The UK, US, and Sweden also experienced rapid growth in income inequality in the 1980s and 1990s. Among industrialized nations, Sweden moved from having one of the most equal income distributions to being one of the most unequal. During the 1980s and early 1990s there continued to be large earnings inequalities between men and women in the Western industrialized nations (Gottschalk and Smeeding, 1997).

The growth of income inequality has been accompanied, in European countries and the US, by an increase in the number of families living in poverty, which grew during the 1980s by $60 \%$ in the UK, and by nearly $40 \%$ in the Netherlands. In Australia, the UK, the US, and Canada, more than half of single-parent households with children have incomes below
the poverty level; in the vast majority of cases, these single parents are women (UNDP, 1999).

Worldwide, the number of people living on less than $\$ 1$ a day is increasing and was projected to reach 1.5 billion by the end of 1999 as a result of the economic crisis in Asia and its aftermath. It is now acknowledged that the international lenders' structural adjustment policies of the 1980s contributed to worsening hardship and inequality among debtor nations (Lewis, 1999; Science and Technology, 1995; Dahlgren, 1990). Because structural adjustment usually imposed user fees on health services, schools, and transportation, among other services, the burden often fell disproportionately on women. As the World Bank's policies have been forced to change, gender equity has become a cornerstone of the Bank's recent anti-poverty strategy (World Bank, 2000).

Impoverishment in southern nations and unequal development in industrialized countries contrasts, according to the UNDP (1999, p. 37), with "the staggering concentration of wealth among the ultra-rich" and with an increasing fascination with celebrity culture, money and greed among the high income nations (Rich, 1999; Frank, 1999). It is against this background that we turn to a discussion of gender equity and its intersection with socioeconomic inequality as they affect women's health.

## 3. Gender equity

In contrast to the dismal picture of international trends in income inequality in the 1990s, the adoption of a gender perspective in health and development research and programs and new legal frameworks for protecting women's rights were major advances of the past decade. The Platform for Action of the Fourth World Conference on Women in Beijing (1995) emphasized a wholistic and life-cycle approach to women's health. In addition to tackling the problems caused by harmful social and economic policies, the Platform targets the discrimination and gender inequalities that underlie women's health. The foundations for the Beijing Platform were laid at the International Conference on Population and Development that took place in Cairo in September, 1994, addressing women's right to control all aspects of their health and affirming the equality of the relationship between women and men in sexual relations and reproduction (UNFPA, 1999). The Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW) provides a
legal framework for the promotion of gender equity in health and reproduction, as well as in social and economic life (Sullivan, 1995). As of 1999, virtually all nations had ratified CEDAW, the major exceptions being Afghanistan and the United States (UNDP, 1999).

Gender equity and economic structures are closely linked. Gender equity has been promoted by the international development organizations (e.g., the World Bank) because it is positively associated with lower fertility and better health for women and children as well as with economic development (Barrett, 1995; Razavi, 1997; World Bank, 1998). A literature with theoretical origins in neo-classical economics has focused especially on male-female equity in intrahousehold decision-making and allocation of resources, and on the economic and social benefits of education for girls and women as a form of human capital investment (World Bank, 1994).

In this approach, intra-household processes involving the exchange of resources among men and women are assumed to affect nutrition, reproductive decision-making and health (Dollar and Gatti, 1999). It singles out the balance of power, fairness and justice of gender relationships, as an analytic criterion on a par with social and economic equity. But gender equity and socioeconomic equality are not synonymous. UN data suggest that gender equity is somewhat independent of economic inequality, at least at the country level (UNDP, 1999). ${ }^{1}$

## 4. Socioeconomic inequalities and health

One reason for the recent interest in socioeconomic determinants of women's health is the recognition that the two decades between 1973 and

[^3]1993 were a period of striking growth in income and wealth inequality in the U.S. and other developed nations (Karoly, 1996; Wolff, 1995), paralleled by increasing socioeconomic disparities in health. The increases in income inequality are attributable to a number of causes, including increases in differential wage rates for more and less skilled workers, devolution of publicly funded social services or "structural adjustment," tax policies favoring the rich, and the decline of labor unions. The increased proportion of female-headed households and the concentration of females' earnings gains in higher-income households also contributed to overall inequality (Karoly and Burtless, 1995). A number of recent studies in the US and in Europe have shown that growing income and wealth inequality is associated with widening differentials in mortality (although estimates of the impact on women have varied) (Wilkinson, 1996). A widely-cited study found that from 1960 to 1986 the death rates in the US for blacks and whites and for men and women showed an overall decline, but the difference in mortality rates between those in higher and lower income and education categories actually increased. By 1986 there was actually a greater disparity between mortality rates of women in the higher and lower educational categories than there had been in 1960 (Pappas et al., 1993).

At the aggregate level, there is a relationship between how income is distributed in the population (percent of income going to a particular segment of the population) and life expectancy, such that countries or regions where a larger share of income goes to the less well-off have higher life expectancy than countries or regions where income distribution is skewed to the better-off. Countries with a more equitable income distribution (such as Japan) enjoy higher life expectancy. The fact that it may be relative rather than absolute aspects of income that affect people suggests a strong psychosocial component (Wilkinson, 1992; Haan et al., 1989). In other words, it may not be occupation and its rewards, per se, that determine health, but job characteristics (e.g., job strain- low control, high demands), limited psychological and social resources, perceived hostility and discrimination, lifestyle "incongruity", and related frustration. The literature is well-summarized in Krieger et al. (1993) and Wilkinson (1996). In formerly Communist states such as Russia, Czechoslovakia, and Hungary, social disintegration and dramatic income polarity have led to decreased life expectancy, more so for men than for women (UNDP, 1999, p. 79, 85).

Significantly, the association of societal and state level income inequality with mortality appears to be independent of the proportion of the population engaged in risk behaviors such as smoking, and of access to health services. In other words, something in the nature of inequality itself appears responsible for socioeconomic differences in mortality patterns (Wilkinson, 1996; Kennedy et al., 1996; Kaplan et al., 1996). Despite the burgeoning literature examining how gender roles interact with socioeconomic position, the extent to which societal patterns of gender equity condition the impact of economic inequality on women's (or men's) health is unknown.

## 5. Social capital as a bridge among inequity, inequality, and health

Recognizing how inequality and disparities among gender and income (as well as ethnic) groups create a burden of psychosocial, functional, and health risks, brings us to the threads of human life that create and support well-being. These threads, woven into a cloth that we call social capital, include kin and community ties and social networks (Wilkinson, 1996; Coleman, 1988). As defined by Coleman (1988), social capital is a resource inherent in the relationship among people or among organizations. Mark Granovetter, an American sociologist, wrote:
"...the analysis of processes in interpersonal networks provides the most fruitful micro-macro bridge. In one way or another, it is through these networks that small-scale interaction becomes translated into large-scale patterns, and that these, in turn, feed back into small groups." (Granovetter, 1973, p. 1360).
It is through interpersonal and inter-group behaviors, and the extent to which they augment or diminish personal resources and well-being, that macro-level events may have their effects at the individual level (Kawachi, 1999; Kawachi et al., 1999). Social capital refers to the resources people experience in their everyday interactions, and thus helps to connect the quality and experience of everyday life with the more abstract experience of aggregate events. Women's interpretation, judgment and experience of events differ from men's (Gilligan, 1982); their experience of the "micro-macro bridge" may differ also.

## 6. A comprehensive model of socioeconomic inequalities and gender equity

Epidemiologists and demographers have only recently begun to consider the processes within households and in women's daily lives that may actually shape their health, or the health of men. Conversely, development economists, researchers and advocates concerned with gender equity are often focused on intra-household processes or women's status in the community, but may pay less attention to socioeconomic inequality as one of the driving engines that ends in women's disadvantage (Schultz, 1997). The World Bank's prioritization of global poverty reduction has been motivated partly by the drastic effects of the structural adjustment policies of the 1980s (World Bank, 2000). While attention to household and community may provide effective guidance for planning programs and services for women, it is by stepping back to the geopolitical context that we can most effectively create and target policies that diminish gender inequality and promote health (Östlin et al., 2001). Ideologies of power, economic reward and exchange, and gender roles and relations are expressed through macro- and micro-level institutions and behaviors. Recent research has demonstrated how variations in economic and social policy contribute to household decisions, role patterns, and health (Khlat et al., 2000; Lahelma et al., this volume).

Explicating how socioeconomic and gender inequality affect women's health demands a comprehensive model that encompasses the multiple ways in which women's health is shaped. Figure 1 presents a framework for this integrated, comprehensive approach. It takes into account the historical, geographical, legal, and political frameworks that provide the overarching context in which men and women live. It includes the cultural and normative dimension that has a profound effect on individual behaviors, and demographic characteristics such as race, place of birth, education, marital status and age. At a level more proximate to health, the focus is the household, the locale for the exchange of the resources that are basic to life, sex, food, warmth, and emotional sustenance. Women's roles in reproduction and production are simultaneously determined by what occurs within the household and community, and also help to shape them. Related, but not identical, are the psychosocial aspects of life: stress, coping strategies, including spirituality, and, more biologically rooted, mood, and other psychological characteristics. Women's roles in family and social networks determine the extent to

Figure 1
A comprehensive framework of factors influencing women's health

| Geopolitical environment | Culture, norms, sanctions | Women's roles in reproduction and production | Health-related mediators | Health outcomes |
| :---: | :---: | :---: | :---: | :---: |
| Geography | Discrimination: <br> Ethnic | Household: <br> Structure | Social capital/ Social networks/ | Chronic disease |
| Policy and | Gender | Division of labor | Support: | Infectious |
| Services: | Age | Ownership/property | Friendship | disease |
| Transportation |  | Support/caretaking | Family | Disability |
| Welfare | Sociodemo- | Equality of access to | Work mates | Functioning |
| Employment | graphic | household resources, | Other ties | Mortality |
| Health care | characteristics: | e.g.: |  | Mental health/ |
| Child care | Age | Wages | Psychosocial: | illness |
|  | Gender | Other income | Stress |  |
| Legal rights: | Ethnicity | Land | Mood |  |
| Women's | Birthplace | Other assets | Coping |  |
| Health | Education | Community roles | Spirituality |  |
| Human | Marital status | Labor market role |  |  |
| Employment | Language |  | Health services: |  |
|  |  | Workplace: | Availability/use |  |
| Organizations: |  | Sector: |  |  |
| Banks |  | Formal | Behaviors: |  |
| Credit coops |  | Home/market-based | Sexual |  |
| Political parties |  | Hierarchies, control, | Substance use |  |
| Advocacy |  | Autority, discretion | Physical activity |  |
| Unions |  | Sex segregation/ | Diet |  |
|  |  | discrimination | Contraception |  |
| Economic: |  |  | Breastfeeding |  |
| Policy |  |  | Smoking, drinking |  |
| Extent of inequality |  |  | Violence |  |

which they have access to "social capital." Life stage and cohort experience, while difficult to show on this two dimensional framework, provide the dynamics shaping women's health. Finally, and most proximate to health outcomes are the biological endowments of individual women. While part of this biological endowment is genetically determined, a large part is not, and is shaped through a process of foetal experience and exposures in infancy and early childhood, as well as in adult and later years. A woman's biological characteristics and inheritance, together with institutional, social, and psychological processes, affect her subsequent health and well-being. Like others (Link and Phelan, 1995; Williams, 1997; Williams and Collins, 1995), I argue that there are fundamental causes of
health differences among women, and that they are rooted in the economic, political, historical, and social arrangements that structure how women live.

## 7. Geopolitical environment

The geopolitical environment includes the economic, political and social structures, as well as characteristics of the actual physical environment in which people live. It is here that ideologies find their expression in institutional structures including laws and policies. Welfare, health, child care, and labor policies and laws have a particular impact on women (Östlin et al., 2001). Environmental quality and regulation are also important, because they determine the degree of cleanliness or pollution to which people are exposed, and the protections to which they are entitled. The legal framework may include laws that protect women's rights in different spheres and that do or do not give women equal protection under the law. The ratification of CEDAW provides a fundamental marker for the support of women's legal rights among nations. However, legislation concerning rights may offer necessary but not sufficient institutional protection for women and may even be inimical to it by encouraging complacency or siphoning programmatic resources into legal, but less interventionist directions (Sharma, 1995; Plata and Calderon, 1995; Scheper-Hughes, 1996). Women's reproductive and health rights are a special kind of rights that have immediate and direct impact upon health. In the geopolitical environment are formal organizations that provide vehicles for women's empowerment or women's oppression. These might include labor and trades unions, or women's welfare unions, microcredit organizations and grameen banks, or other vehicles for collectivized resources, but they might also include organizations opposed to women's reproductive and household rights.

The geopolitical environment includes the degree of economic equality or inequality measured at an aggregate level, such as a city, state, province or nation. Included are social and economic policies such as retrenchment and structural adjustment. These affect health services, transportation, and other publicly funded services through the imposition of user fees, in ways that may pose differential burdens for women, depending upon their resources. Finally, in this area, we should include such
expressions of ideology as sexism, racism and ageism, all of which both contribute to laws and policies and result from them (Krieger et al., 1993).

## 8. Culture, religion, norms, and sanctions

Culture, religion, norms and sanctions are closely related to but not identical with the legal and institutional structures that regulate peoples' lives. Hammel (1990) proposed a "theory of culture for demography" that moves far beyond the "culture as identifier" approach used by most epidemiologists and demographers. His key idea is that:
"Explanations of individual-level demographic (or any other) social behavior must be situated at a microlevel that not only reflects immediately relevant economic and ecological considerations and overarching social institutions, but also includes especially the identity of significant co-actors in a social network." (p. 45)
He continues:
"Culture is an evaluative conversation constructed by actors out of the raw materials afforded by tradition and ongoing experience. It is continually modified by them in processes of social interaction, and their behavior is guided by anticipation of such cultural evaluation." (p. 45)
Culture provides the explanations and guidelines for individual behavior (including reproductive and health-related behaviors) but it is collectively and socially constituted within a framework of economic and social institutions. A thoughtful consideration of culture moves us beyond the language of the dominant institutions into the understandings that women themselves have about their health-related behaviors, and into a more rounded consideration of the ways in which equity and power are expressed in every day life (Bledsoe et al., 1994; Watkins et al., 1992). The interplay of culture, institutional hegemony, and deprivation often forces women to make choices that appear self-defeating (Scheper-Hughes, 1992). Cultural preferences, including religious norms, help to explain variations in gender inequality (Dollar and Gatti, 1999).

## 9. Women's roles in reproduction and production

Women's roles in reproduction and production are framed at the household level. It is in the household that intimate relations are struc-
tured and issues of the allocation of resources between sexual partners and between generations are organized and expressed. Important issues to consider are: women's role in the formal labor market or the informal sector such as market and home-based work, and how work roles are integrated with household labor (Nathanson, 1980; Arber, 1991); the division of labor within the household; and other family and household members for whom the woman may be responsible (Matthews and Power, this volume). Closely related, but conceptually distinct, is the intrahousehold allocation of material, informational and psychosocial resources, in other words, the pattern of exchange in the household. Here, too, relationships of power, control, authority and equity may be played out with varying consequences for women's health (Nanda, 2000). Another dimension, for many women, of their responsibilities, is care, nurturance, and support of household members (in many cases, this caring and nurturing is extended beyond the physical confines of the household, within the kin or social network, and should be taken into account). Support and caretaking are a double-edged sword. The provision of support and care may be emotionally satisfying and may also provide some future social credit or capital for the woman's own needs that she can draw upon from children, siblings, or friends. At the same time, supporting and caretaking can be tremendously draining. Many women experience the "double" or even the "triple" day (Hochschild, 1997b).

Simply providing more schooling for women is not sufficient to reduce the gender inequality in control of resources within the household. Schultz (1997) estimated income inequality in the world from 1960 to 1994 at three levels of aggregation: countries, households within countries, and between women and men within households. He found that despite women's gains in education there is persistent unequal control of resources in the household.

Also, within the household, women are producers of human capital. In rearing their young they produce human capital through the promotion of their own and their children's health, nutrition, child care, and the teaching of language and other skills that have labor market value, and gender preferences are expressed through these activities, also (Sen, 1984; Thomas, 1990). They also contribute to human capital by the feeding and caretaking of partners and other working members of the household. Depending on other resources and constraints on women, these activities may have positive or negative effects on health.

The way in which women share in community activities is often interwoven with their household tasks (Barrett, 1995). In western industrialized countries this may include volunteer activities in children's schools, involvement in local political campaigns, or involvement in children's recreational sports. In non-industrialized nations it may include household maintenance chores performed in public or communal settings such as washing clothes, drawing water, or shopping for food, as well as the participation in local market organizations. Increasingly, women are playing roles in non-governmental organizations in their communities and integrating these roles with household labour. Women's credit co-operatives alter the relationship between market and reproductive roles and diminish the impact of socioeconomic inequality on the organization of women's lives (Brill and Kobre, 1999). These bridging roles are crucial to the formation of social capital (Kawachi, 1999; Kawachi et al., 1999).

The household is the most intimate setting for the playing out of dramas of power, authority and control, all of which may affect women in a number of ways. Male partners, and sometimes in-laws, may control women's access to children, food, money, health services, and even life itself. The expression of violence, a product of cultural, socioeconomic and power relations, towards women is a direct and indirect risk to women's health. Violence towards women is associated with higher rates of sexually transmitted disease, including HIV/AIDS, and adverse birth outcomes (Jaspard and Saurel-Cubizolles, this volume; Gielen et al., 1994). Violence towards women takes a large toll on women's psychological health, as well as on the health and well being of children in the household. There is evidence, too, that intra-household and community violence against women is an expression of socioeconomic inequality at the interpersonal level (Ocampo et al., 1995).

The workplace, too, provides a setting for dramas of control, authority, and relative power, much of which is gender-based (Wolf and Fligstein, 1979; McGuire and Reskin, 1993). The decline of the power of labour and trades unions, combined with the increase in contract and temporary labour, have diminished the status and rights of individual workers, many of whom are now isolated in space (as home workers) or in time, as employment tenure shortens. In California, until the 1960s, thousands of Mexican-origin women found employment in fruit and vegetable canneries. Despite the often poor working conditions, cannery culture promoted close ties among women workers that often spilled into the organization and maintenance of the household, and the work had
seasonal predictability that allowed women to integrate home chores with wage labour (Zavella, 1987; Ruiz, 1987). More recently, immigrant women have found employment as domestic servants, janitors, or low-wage workers in electronics and garment industries, work that is often isolating and demeaning, and offers no opportunity for advancement (Segura, 1989). Globalization and the proliferation of free trade zones have led to the proliferation of workplaces where "discretion" and "job control" are non-existent. Women's occupational as well as household roles, separately and together, relate to their physical and mental health and to their mortality risks (Smith and Waitzman, 1994).

## 10. Health-related mediators

The way in which resources such as money, food, and emotional warmth are exchanged in the household influences psychosocial health, nutritional well-being, access to health services, and the expression of violence. Resource exchange mediates the effects of geopolitical, cultural, and household patterns of equity and inequality on health status and outcomes. Health-related mediators of inequality and equity include health behaviours; access to and use of health services; stressors; and psychosocial resources and strategies including social ties, coping and spirituality.

Health behaviours include eating patterns, use of tobacco, alcohol and other mood-altering substances, and exercise and physical activity, by others in the household as well as by women themselves. Other behaviours that affect women's health include contraception, breast-feeding and the use of different forms of prescription and over-the-counter medications, and the growing use of therapies such as homeopathy and meditation in Western industrialized nations. Although these are often viewed and "treated" as individually determined, they are almost always the result of a complex pattern of causes including marketing, pricing, and social and cultural meaning (Graham, 1994). One of the most fascinating phenomena in epidemiology is how behaviors become more or less accepted by women. For example, smoking rates among women vary with social class in ways that are culturally and nationally quite specific. As better educated women (and men) in the US have rejected smoking as unhealthful (e.g., National Center for Health Statistics, 1998), cigarette companies have aggressively turned their marketing efforts towards adolescents, especially females, and to populations in newly emergent market nations
such as China, which had, until recently, quite low rates of cigarette smoking.

Access to health services is differentially available to women depending upon their geographic location, insurance status or ability to pay, their ease in handling the bureaucratic and authoritarian structure of health care delivery, the presence of traditional or non-bureaucratic providers of care, and the extent to which families support women's access to and use of services (Weisman, 1998). Once within the health care system, women may experience differential diagnosis or treatment depending upon their status, social power, and socioeconomic standing, as well as upon racial, ethnic, linguistic or cultural background (Clancy, 2000).

Stress, and stressful life events, are related to a number of disorders, both psychological and physical, among women (Hogue, 2000; Williams and Umberson, 2000). Effective coping strategies such as support from social networks, and spirituality, can reduce stress, promote physical and mental well-being, and improve health. A woman's role in formal and informal labor markets, her position in a kin network and household, and her marital and parental status, shape the number and extent of her social ties. The "family" may come to be workmates with whom a woman spends much of her day (Hochschild, 1997a). The effect of social ties and support networks on women's health depends on a variety of demographic and environmental factors such as age, occupational position and role including discretion and control on the job, whether she lives in an urban or rural setting, and genetic resilience.

One coping strategy, spirituality, is helpful to women in two ways. By promoting internal resources (coping) women are able to come to terms with personal and social hardship, and obtain a feeling of well-being and calm. Spirituality as expressed through church, mosque, or synagogue attendance or participation in prayer or meditation groups, provides a form of social capital, extending an individual's caring networks, that may be protective and assist in difficult times (Jarvis and Northcott, 1987; Levin and Vanderpool, 1989; Miller, 1995). ${ }^{2}$

In virtually all societies, powerful market forces, often globalized, shape women's behaviours and expectations through the manipulation of cultural symbols and their commodification. Market forces reinforce existing socioeconomic patterns of women's psychosocial response by play-

[^4]ing on the importance of children and partners. Qualitative research conducted by Hilary Graham in the UK suggests that women's choice among commodified coping mechanisms (e.g., smoking and certain foods) is socioeconomically determined (Graham, 1994). Class-based strategies sell products that demonstrate rank (designer handbags); reduce stress (food, tobacco); or assist in coping (cosmetics, "labour-saving" devices.)

Mood, personality disorders, depression and anxiety are mediators of other health outcomes and mental health endpoints in themselves; their incidence varies by age, class and ethnicity. Depression and other adverse psychological states place women at risk of violence, including sexual assault, and, via the immune system, may lead to increased incidence of chronic and infectious disease (McDonough et al., this volume). We are only beginning to understand how the natural hormonal fluctuation over the life course affects women's mood, health and well being, independently, and jointly with other mediators, such as diet and physical activity (Seeman, 2000). Complicating the picture is evidence that perceptions of hormonal variations, such as the symptoms of menopause, may be culturally determined (Sowers, 2000, Chapt. 92).

## 11. Health outcomes

Many health outcomes, including disability, perceived health status, and the presence or absence of disease and mortality risk, are shaped by a complex process of environmental, social, behavioral, psychosocial, and genetic events. Socioeconomic factors, including education, poverty, income, income inequality, and occupation, are some of the strongest and most consistent predictors of health and mortality. Gender (in)equity, combined with socioeconomic inequality, together form a powerful explanatory framework for variations in women's health. We have seen how the geopolitical environment, with its legal, political, and economic institutions, in turn contributes to patterns of inequality in the household, where the more proximal actions that affect health often take place. Psychosocial resources, whether positive, such as social networks and systems of support, or negative, such as stress and its physiological expression, also mediate expressions of inequality. Recent research is examining the extent to which repeated hardship, or "allostatic load," carried by some individuals may depress the immune system and contribute to disease (e.g., Seeman et al., 1997).

## 12. A life course perspective

Health is the result of a complex interplay of biological, including genetic, demographic, socioeconomic, psychosocial and behavioral factors. Much of the research on women's health is based upon a snapshot of a small part of this complexity. A dynamic perspective that takes account of intergenerational, foetal, childhood, and adolescent precursors to adult health, as well as of cohort experiences, will deepen our understanding of the social and economic patterning of women's health. This is often constrained by the absence of longitudinal data sets that include socioeconomic and health variables, with some exceptions (e.g., Power et al., 1998; Matthews and Power, this volume). In the US, the Health and Retirement Survey and the AHEAD Survey are filling in our picture of socioeconomic-health relationship for older men and women of different ethnic groups. In the UK, the British birth cohort studies (e.g., Wadsworth and Kuh, 1997; Matthews and Power, this volume) allow researchers to test causal hypotheses about health trajectories of men and women over time.

## 13. Examples of integrated social and economic frameworks of women's health

Several researchers in the English-speaking world have attempted to develop theoretical approaches to women's health that integrate inequality in social and economic position with women's roles in production and reproduction. I present examples from the US-UK literature, but their theoretical implications are applicable cross-culturally and crossnationally.

The "weathering" hypothesis, or analytic framework, proposes that women age in different ways depending upon how varying life circumstances undermine or promote health, and that women's health and mortality experience reflects a cumulation or cascade of advantages and disadvantages (Geronimus, 1992). The strength of this approach is that it unites lifespan and environmental factors and is applicable to many aspects of women's health The theory helps to explain ethnic as well as socioeconomic differences in the development of chronic conditions since women of different ethnic backgrounds "weather" or age at different rates, and it encompasses age-based trajectories of behaviors such as
smoking, as well as environmental exposures and access to health services. The weathering framework also helps to explain the intergenerational transmission of the link between SES and health, by connecting physical manifestations of accelerated aging such as hypertension to infant's and children's health (Geronimus et al., 1991; Geronimus and Hillemeier, 1992). The weathering hypothesis emphasizes how the chronic burdens of everyday deprivation and environmental exposures affect health and how age-related patterns of childbearing and caretaking are responses to perceived vulnerability.

The analytic framework that integrates women's roles in the household (and the consumption patterns that follow from these roles) with structural measures such as occupational class and other socioeconomic indicators, inherently captures aspects of equity and equality (Arber, 1991; Khlat et al., 2000; Walters et al., this volume). This approach is particularly useful for capturing socioeconomic factors in women's lives, since paid employment is both a potential stressor (when added to child care and marital roles) and also an indicator of potential material and social resources. It takes account of the differing day-to-day realities of men's and women's lives within a socioeconomic framework. Consumption measures, such as housing tenure and car ownership, have been shown to be equally or more revealing of a woman's class position than occupation, perhaps because they are resources that make a difference in women's everyday lives. The interaction effects of work and home roles differ depending on gender and household configuration and several studies have found that lone mothers are particularly disadvantaged with regard to physical and mental health (Arber and Cooper, 2000; Lahelma et al., this volume). The socioeconomic factors as well as the family and occupational roles that influence health in women may be different from the factors that influence health in men. Women are more likely to experience role strain and overload that occur when familial responsibilities are combined with occupation-related stress. These are compounded (or alleviated) by material circumstances. For men, occupational class and employment status explain more of the variation in health than do familial roles and responsibilities (Arber, 1991). In southern countries, similarly complex relationships occur among gender, family, and labor market role variables, although effects may be in different directions. For example, working does not always enhance women's control over resources. The roles played by consumption variables, culture and level of development differ. In one Indian study, possession of a pressure cooker freed
women's time, but the presence of a sewing machine increased servitude within the household (Nanda, 2000).

In the UK, Hilary Graham uses a combination of qualitative and quantitative methods and data drawn from a variety of sources to examine how women, especially women with children, make different kinds of decisions about health-related behaviors (Graham, 1984; Graham, 1994). She looks at how the interplay of economic circumstances and household structure influence individual family members. Both social class and gender structure the organization of family life and it is in family life (for the most part) where health is produced. Graham writes:
"Assumptions about the needs and obligations of men and women play a primary role in shaping the distribution of resources within families... However, their effects are not restricted to the domestic domain. In the labour market, too, there are sex differences in employment and earnings. With the increasing numbers of female-headed families, these differences have become an important factors in fueling inequalities between families.
"The patterns of resource allocation within and between families are seen to reflect a structure of sexual divisions as deep-rooted and pervasive as the class divisions traditionally associated with Western societies. This structure is linked to family health in obvious and important ways...
"...[T]he theme of justice, power, and fairness, in how social environments and life chances are structured and how roles are allocated within social institutions, including the workplace, the household, and the family, lies just below the surface... [S]ocioeconomic circumstances, in combination with culturally appropriated women's roles, produce differing patterns of health, disability, and mortality." (Graham, 1984, p. 58-59)
Graham's work explores how the arrangement of space, the preparation and distribution of food, and the provision of heating relates to gender relations within the household, given the impact of socioeconomic relations or social class on household resources. Because of the symbolic significance of food, when resources are short women often accommodate first to children's and men's needs, putting their own nutrition last, a pattern that is found in a number of cultures.

HIV/AIDS provides, perhaps, the most vivid example of how women's lack of power within and outside of the household, and the forces of social and economic inequality and marginalization, lead to disease, social disintegration, and death. The burden is especially great on the most vulnerable women in the most vulnerable economies (often, but not exclusively, southern). It is in HIV/AIDS that the geopolitical and historical vivdly transect socioeconomic and gender relations. A paper by

Bassett and Mhloyi (1991) provides a dramatic illustration of how these processes occur in Zimbabwe. The paper's underlying theoretical premise, that a historical, geographically-specific legacy of economic and gender relations poses epidemiologic vulnerability for women, is universally true. Other examples include: son preference (for example, in India and China) resulting in female infanticide (Östlin et al., 2001), and female genital mutilation.

## 14. Operationalizing a multi-level framework

Introducing historical, policy- and institutional-level constructs into empirical studies of health mediators and outcomes is not an easy task, theoretically or statistically (Diez-Roux, 1998; Von Korff et al., 1992). Much, if not most, of the research in women's health has been focused on the right-hand end of the framework shown in Figure 1, with demographic characteristics used as "control" variables. On the other hand, there is a very long tradition in public health and in the social sciences that recognizes the importance of the environment to individual behavior and health, as well as the difficulty in estimating it (Mason et al., 1983; Wong and Mason, 1991). Our task as researchers on women's health is to move towards the left-hand side of Figure 1, carefully defining what we mean by "environment," making certain that it is appropriately measured, and choosing the correct statistical techniques for our models (Wiggins et al., this volume). In Figure 1, geopolitical environment, culture and norms refer to aspects of the environment that cannot be measured by aggregating individual-level data. Aggregate data are important in characterizing group-level phenomena such as the portion of women in a community engaged in employment out of the household, or the role of social networks and social capital (e.g., Kawachi et al., 1999). While many environmental characteristics are measurable, others are not and may be unobserved or unmeasured (e.g., norms or perceived social and economic opportunities) but are an important part of causal thinking (Brewster, 1994). But we also need to include the more "macro" or geopolitical factors in our models. Particular care is needed when taking a cross-national or comparative approach because some constructs, such as "ethnicity", "household" or even marriage, are not really comparable across societies (Wong and Mason, 1991). An example of a cross-national multi-level analysis of an issue integral to women's health is provided by Mason and

Smith (2000). They use data from communities in Pakistan, India, Malaysia, Thailand and the Philippines that have different gender traditions to explore how gender context in different types of communities in each country influences the joint goals of husbands and wives in desire for children, and their use of contraceptives.

## 15. What can be done to improve understanding of the social and economic patterning of women's health?

Elite research institutions and international governmental and nongovernmental organizations have rushed during the past 15 years to make gender a focus of research, policy and program activity. Gender equity is viewed as a cornerstone of economic development. Policy initiatives have made primary school for girls nearly universal during the past decade, an investment that results in lower fertility, lower infant mortality, and better nutrition and health practices in the household. Reproductive health services for women have proliferated, and there is increased interest in the health and well being of the growing elderly segment of the population which is predominantly women. I propose a variety of ways that we can continue to make progress in research and policymaking as they promote gender and socioeconomic equity and women's health.
(a) Putpressure on the leading research and development organizations to develop integrated approaches to women's health, using frameworks, like the one developed for this paper, that consider jointly gender equity and socioeconomic inequality, and that situate health in specific historical, political, legal and social contexts. Research and programs that do this are in the minority. More typically, researchers use sex and socioeconomic status as control variables, and clinicians persist in developing programs or treatment regimens that focus on one limited aspect of women's health or behaviors. Disciplinary boundaries reinforce the difficulties of integrating social, economic, and epidemiological approaches to women's health. Strategies such as conferences and research initiatives that challenge the boundaries will provide a substantial contribution to our understanding of the patterning of women's health.
(b) Domestic and international funders should continue to support research initiatives that encourage detailed and sophisticated tests of a variety of hypotheses about the social and economic patterning of women's health. The framework presented in this paper can guide studies that examine
how gender equity and socioeconomic inequality jointly shape women's and men's health across the lifecourse. It demands a multilevel perspective, taking account of contextual and individual level variables. Comparative research will lead to a better understanding of how policies and culture shape socioeconomic and household structures and roles. Attention to the methodological issues posed by a multilevel approach to women's health, and the sharing of problems, techniques, and solutions across disciplinary and national boundaries, will deepen our understanding and improve policy and programmatic strategies.
(c) Use ethnographic techniques to provide new insights. Survey research and vital and disease registries are necessary but not sufficient. The insights that generate theory and advance testable, quantifiable hypotheses often come from detailed qualitative field work (e.g., Graham, 1984). The recent integration of ethnographic methods by demography and epidemiology has produced exciting insights, often about marginalized populations. Applying some of this research creativity to women in the mainstream may open new lines of inquiry.
(d) Create and maintain appropriate data systems for monitoring and reporting on socioeconomic inequalities and gender equity, both in themselves and as they affect women's health. Even in the affluent developed countries, such systems are far from perfect and they are often weak in poorer nations (Braveman, 1996). Vital and disease registries and periodic surveys such as the Demographic and Health Surveys (DHS) can inform communities and policy makers about problems and prospects in improving women's health. Through the MEASURE project, the DHS now includes questions on gender relations and empowerment and questionnaires are administered to men as well as to women. ${ }^{3}$ In order for the data to be meaningful, appropriate socioeconomic and equity measures must be included and it is critical that survey questions are formulated to take account of women's own perspectives and interpretations. Health and economic data should be longitudinal and integrated, and data sets should contain contextual legal, political, and health services variables at country, regional, and local levels. Supporting the data gathering, analytic and reporting capacity of nations is an important goal. United Nations statistics provide an example of how gender equity and economic equality can be monitored simultaneously at the country level, resulting in useful equity

[^5]and empowerment indices that facilitate international comparisons (UNDP, 1999).

## 16. Why propose a unified framework of women's health?

Research is costly, but so is the failure to understand. It would be nearly impossible to test the entire model proposed in this paper. Yet, advances in our understanding of women's health have come through multi-disciplinary work that expands paradigms: an example is the burgeoning literature describing the physical and mental health effects of gender, labor market, and household roles. These studies take a large step forward in integrating gender equity (fairness in resource distribution) with socioeconomic position and rewards. Contextualizing studies in historical and geopolitical frameworks is a next big step, along with deepened exploration of how patterns may vary across different points in the lifecourse and for different birth cohorts. An advantage of this combined framework is its applicability to health outcomes across nations and cultures. It allows us to understand what in the patterning of women's health is universal and what is unique, and to develop humane and effective policies that promote equity, equality, and well-being.

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# A GENERATION APART? GENDER-RELATED EXPERIENCES AND HEALTH IN WOMEN IN EARLY AND LATE MID-LIFE* 

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#### Abstract

There bave been a number of critiques in the last few years of the prevailing paradigm of research on gender and health which dominated in the latter part of the twentieth century. One such criticism bas centred on the abistoric and decontextualised way in which much evidence for gender differences has been used. In this paper we aim to show that, even within a relatively confined geographical locale over a relatively short period of time, there bave been substantial changes in gender relations which are likely to bave affected the experience, opportunities, and attitudes of women born in the early 1930s and early 1950s. We illustrate this using data from a study of inequalities in bealth in Scotland, which includes unusually rich longitudinal data on gender, including occupancy and experience of gender-related roles, attitudinal data on gender equality, and measures of gender role orientation (GRO). These are related to various dimensions of health and health behaviour. The data show substantial differences in the experiences of two generations of women, who are just 20 years apart in age, and a lack of consistency between meas-


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ures of GRO and bealth. Whilst on the one band these data suggest the importance of taking more account of the broader (social, bistorical or political) context, the analysis also bighlights the methodological problems posed.

Keywords: Women's health, Gender roles, Inequalities, Scotland.

## Résumé

Ces dernières années, on a beaucoup critiqué le paradigme qui prévalait dans les recherches sur le genre et la santé à la fin du $X X^{e}$ siècle. L'une de ces critiques portait sur l'usage a-historique et décontextualisé qui a été fait de la plupart des données sur les différences entre sexes. L'auteur de cette communication veut montrer que, même dans un cadre géographique relativement restreint et sur un intervalle de temps relativement court, on a observé des évolutions importantes dans les rapports sociaux entre les sexes, qui peuvent avoir influencé le vécu, les perspectives et les attitudes des femmes nées au début des années 1930 et au début des années 1950. Elle illustre son propos en utilisant les données d'une étude écossaise sur les inégalités en matière de santé, comprenant des données longitudinales exceptionnellement riches sur la problématique du genre : attribution et exercice des rôles masculins et féminins, attitudes en matière d'égalité des sexes et mesures de la position individuelle à l'égard de la répartition sexuelle des rôles (indice GRO - gender role orientation). Ces facteurs sont liés à divers aspects de la santé et des comportements en matière de santé. Les données révèlent de grandes différences dans le vécu des deux générations féminines à vingt ans de distance et un manque de concordance entre les indices GRO et la santé. D'un côté, ces données montrent qu'il est important de mieux tenir compte du contexte le plus large (social, bistorique ou politique), de l'autre, l'analyse met aussi en évidence les problèmes méthodologiques qui se posent.

Mots-clés : Écosse, Santé des femmes, Rôles des sexes, Inégalités.

## 1. Introduction: Comparing generations of women

"The secondary status of woman in society is one of the true universals, a pan-cultural fact. Yet within that universal fact, the specific cultural conceptions and symbolizations of women are extraordinarily diverse and even mutually contradictory. Further, the actual treatment of women and their relative power and contribution vary enormously from
culture to culture, and over different periods in the history of particular cultural traditions. Both of these points - the universal fact and the cultural variation - constitute problems to be explained" (Ortner, 1974, p. 67).

This paper seeks to focus on one dimension of diversity amongst women highlighted above by Ortner, namely that 'over different periods in the history of particular cultural traditions'. Amongst the many critiques of research on gender and health, the tendency for research to be cited in an historical void, despite many changes and challenges to the gender order in the last quarter of the twentieth century, has been highlighted recently (see, Annandale and Hunt, 2000; Hunt and Annandale, 1999; Popay and Groves, 2000). Such changes in the ways in which gender structures opportunities and life chances give rise, we have suggested, to the need for
"more systematic evaluation of existing evidence, taking more account of the broad macro-economic context and a corresponding need to cite evidence with more reference to time, place, specific health condition and age" (Hunt and Annandale, 1999, p. 1).
A failure to address the historical context of research may mask potentially important aetiological pathways between women's (and men's) lived experiences and their health. However, attempting to integrate such complexities and subtleties into studies of health and illness presents a major methodological challenge to future research.

Following a brief review of some recent critiques of research on gender and health and the emergence of a focus on historical context, this paper examines some changes in key social statuses which remain closely linked to, and themselves structure, gender in Britain. It then presents some data on two cohorts of women living in the same (relatively small) geographical locale (in the west of Scotland) who were born just 20 years apart. The empirical part of this paper is intended to be illustrative and exploratory, seeking to highlight differences and complexities that are frequently ignored in quantitative research. The aim is to portray the extent of difference between two generations of women who are often grouped together in the same wide age band in quantitative analyses; and thus to question whether we would expect to observe the same relationships between indicators of gendered experiences and health in these women whose experiences of gender relations are likely to differ somewhat.

## 2. The emergence of a concern about historical context in gender and health

Research on women's health, and later on gender and health, became a strong theme within medical sociology in the latter decades of the twentieth century (see Annandale and Hunt, 2000 for a review). However, as Lane and Cibula note
"[although] gender studies have proliferated enormously .... this wealth of published literature has produced more questions than definitive answers" (Lane and Cibula, 2000, p. 136).
Research in the area has been described as being at a 'crossroads' (Annandale and Hunt, 2000) and the "pervasive grand narrative in gender inequalities" that 'women get sicker but men die quicker' is portrayed as
"currently being recast.. [partly].. as a response to a growing critique of the dominant methodological and theoretical frameworks informing research on gender inequalities" (Popay and Groves, 2000, p. 66).
A number of broad challenges are evident. The dominance of perspectives from Britain and North America is being challenged through increasing attention to other countries. There is concern to integrate evidence and perspectives from both high income and low income countries (see Östlin et al., 2001), and to examine how gender is modified, such as by ethnicity or class (Macintyre and Hunt, 1997). Others have focussed on the lack of integration of biological and sociological models (see, for example, Bird and Rieker, 1999; Rieker and Bird, 2000).

Another common theme centres on pleas for greater recognition of increased diversity within men and within women (Annandale and Hunt, 1990; Annandale and Hunt, 2000; Rieker and Bird, 2000). The origin of the tendency to focus on difference between men and women has many roots, but one lies in the patterning of mortality. The fact that greater female longevity has been pronounced for many decades in Britain and other parts of the developed world, has led to assumptions about the inevitability of differential mortality patterns by gender (often assumed to be a biological 'given'), and thence to a tendency to universalise the health experience of women and to pay too little attention to the historical specificity of their experiences. Greater female longevity, and higher male mortality at all stages of the life course, is now often taken for granted in developed societies: in 1997, for example, life ex-
pectancy at birth in the UK was 79.6 for females and 74.6 for males (Office for National Statistics, 2000), and from middle age men have a death rate similar to that of women who are five years older (Craig, 1995). Yet, this female advantage is a relatively recent phenomenon and female excess mortality, which defined many western societies prior to the industrial revolution, still pertains in some less developed countries today (see Annandale, 1998 for a more detailed review).

Recently some critiques have highlighted the lack of context in much research on gender and health. In a paper challenging the dominance of the current research paradigm, Macintyre and colleagues suggested that research on differences between men and women should address 'the social and historical context of our observations' (Macintyre et al., 1996, p. 624). However, there has not only been a degree of collective amnesia about historical changes in the 'outcome' side of the equation (i.e. patterns of mortality and morbidity), but also a concurrent failure to place potential explanatory mechanisms and processes in their historical context. This can perhaps best be illustrated with reference to the research agenda which focused on social roles as explanations for the 'men die quicker, but women get sicker' paradigm. Rieker and Bird open a recent overview of sociological explanations of gender differences in health by noting that,
"Socially constructed gender roles, identities, and inequality in opportunities and resources shape men's and women's lives and in turn affect their health" (Rieker and Bird, 2000, p. 98).
Yet too often such 'socially constructed roles' have been treated as static, or reduced to summary statuses (such as employee, or mother or father) without recognition that the meaning and consequences of such roles is both historically, geographically and culturally circumscribed (Simon, 1995; Simon, 1997). Juanne Clarke, in her forward-thinking review of the literature in the early 1980s (Clarke, 1983) which anticipated many of the themes which were picked up in critiques over a decade later, notes that:
"Social-role hypotheses look at the ways in which women's roles ... are associated with different sorts and levels of health and illness. The assumption is that these roles have the same meanings, first, to different women and, then, to women and men; or that the context and the content of domestic labour is comparable across classes, cultural/ethnic groups, educational levels and so on (p. 71-72). ...The larger conceptual issue regarding gender has to do with the validity and efficacy of asking
questions about sex differences and explaining these differences in terms of social roles... We are explaining a minuscule and contextless behaviour when the social-structural, cultural and economic forces which move persons dialectically are ignored. Questions about sex and illness are ambiguous unless the social construction of the categories of meaning associated with all of sex, gender and illness are explored in their full social, political and economic surroundings." (p. 71).
Lane and Cibula follow in a similar vein in suggesting that
"Clearly, both culturally patterned gender behaviour and biologically based risks interact to produce health and illness. Very few studies, however, link the examination of the cultural and political construction of gender with rates of actual mortality and morbidity" (Lane and Cibula, 2000, p. 138).
One study by Kawachi and colleagues which has attempted to do this in the United States concluded that mortality was lower in states which had higher levels of political participation among women, and greater economic autonomy (Kawachi et al., 1999). This, they claim, demonstrates the importance of adding a "society and health 'lens" to the "variety of theoretical 'lenses' through which to view and analyze gender differences in health" (Kawachi et al., 1999, p. 21).

Thus, over recent years complex tensions have arisen in research on gender and health between a recognition of the need to take on board developments within broader feminist thought and changes in the actual form of gender relations in society, and the recognition that, despite these, gender still fundamentally structures opportunities (Emslie et al., 1999). The necessity of evaluating and conducting research within an explicit historical (or socio-political) context is coming to the fore. As Popay and Groves note:
"As Mills (1959: 145) has argued: 'every social science - or better, every well considered social study - requires an historical scope of conception and a full use of historical material"' (Popay and Groves, 2000, p. 70).
To illustrate the importance of relatively short-term social change, we now look at changes in circumstances and expectations for women in Britain, before contrasting gender-related experiences of two generations of women, the older group born in the early 1930s and the younger group born in the early 1950 s, living within the west of Scotland. These women are part of the Twenty-07 Study, a longitudinal study of the social patterning of health which has followed three age cohorts; aged around 15, 35, and 55 years when first studied in

1987/88. In this paper we contrast women from the two older cohorts, and mainly use data which derive from the third major contact with the cohorts in 1995/6 when the women were in their early forties and early sixties.

## 3. Changes in circumstances and expectations for women: The British context

There are very many ways in which the circumstances, conventions and expectations for women in these two cohorts, born in the early 1930s and early 1950s, changed dramatically. At the most basic level, life expectancy at birth continued to increase in the middle third of the twentieth century. In 1931 life expectancy at birth in England and Wales was 58 for men and 62 for women. Equivalent figures for 1961 were 68 and 74 (Charlton, 1997, p. 20, Table 3.3). Thus, over just 30 years the gender gap widened as women gained an additional 12 years of life on average, and men gained 10. The largest changes in mortality in Britain during the twentieth century occurred in childhood, especially for those born between 1911 and 1951. Infant death rates began to fall steadily in Britain at the beginning of the twentieth century, with an accelerated decline beginning immediately after the Second World War. Thus, mortality early in life was very different at the time that the two cohorts were born; indeed infant mortality rates more than halved over this short time. For boys, death rates under the age of one were 70 per 1000 for those born in 1931-1935 and 30 per 1000 for those born in 1951-1955; equivalent figures for girls were 54 and 23 (Charlton, 1997, p. 23, Table 3.4). Of those born in 1931, only around $75 \%$ survived to age 65 (Charlton, 1997).

We now turn to consider broad trends in marriage, reproduction and employment since, as illustrated by Sylvia Walby below, these are of central importance to an understanding of gender at any point in time:
"The significance of politics for the analysis of gender relations has often been underestimated. In particular, the balance that women choose between domestic and paid employment is crucially structured by the environment created by state policies. These include policies expressly oriented to the reconciliation of working and family life, such as publicly funded child care, as well as the regulation of gender relations in em-
ployment such as the Equal Pay Act and Sex Discrimination Acts. There are also important policies which have an indirect effect on the sexual division of labour through the regulation of the wider social environment within which men and women make gendered decisions. This includes policies regulating marriage ... [and] those regulating aspects of sexual practice and fertility, such as the availability of legal abortion and contraception." (Walby, 1997, p. 137).
There have been dramatic changes over the latter half of the twentieth century in patterns of marriage and cohabitation in Britain (Evandrou and Falkingham, 2000; Haskey, 1995). In England and Wales in 1946, immediately after the Second World War, the median ages of men and women marrying for the first time were 26 and 23.5 years respectively. The median ages fell until in the late 1960s they were 23 (for men) and 21 years (for women), yet by 1993 they had risen again to 27 and 25, the oldest median ages for over 60 years (Haskey, 1995). By 1997 the mean age of women at first birth was 26.8 (Ruddock et al., 1998). During this period the percentage of women who lived with their future husbands before marriage rose from less than $5 \%$ to around $70 \%$ for those marrying in the early 1990s (Haskey, 1995). The proportion of women who had ever divorced by age 45 was less than $10 \%$ for the birth cohort of 1931 as compared with almost $25 \%$ for the birth cohort of 1946 (Evandrou and Falkingham, 2000, Figure 2).

There have also been changes in patterns of family formation over the last few decades. Here we report changes for women of the same age as our two age cohorts. For women who were born in 1932 in England and Wales, the average number of liveborn children was around 2.17 by the age of 35 , and 2.34 by the age of 45 . Equivalent figures for women born in 1952 were 1.91 and 2.05. Projected figures also suggest an increase in the percentage of women who will remain childless ( $13 \%$ by age 45 for women born in 1932 compared with $16 \%$ for women born in 1952 and projected figure of $23 \%$ for those born in 1972) (Ruddock et al., 1998). This increase in childlessness in the UK is more marked than for other countries in the European Union such as France, Spain and Portugal (Pearce et al., 1999). There are also major changes in the proportions of women who bring up their children as lone parents for at least part of their lives, although the prevalence of lone motherhood only began to increase dramatically for women born in the early 1960s and subsequently, thus principally affecting cohorts born later than the two that we compare in this paper (Haskey, 1998).

We have reviewed broad social changes in the latter part of the twentieth century, particularly in employment and education, in some detail elsewhere (Annandale and Hunt, 2000). These are two key areas identified by Walby in the "fundamental transformations of gender relations in the contemporary Western World [which are] affecting the economy and all forms of social relations" (Annandale and Hunt, 2000, p. 1) (Walby, 1997). We have argued: that "while many of these changes are massive in scope, they are complex and subject to diverse explanation" (Annandale and Hunt, 2000, p. 3); and that "the sociology of work and employment is especially important to research on gender and health status which has had the link between employment and health at its core since its inception" (p. 3). Whilst there has been a trend towards women's increasing involvement in the paid labour force and in different work environments, it is difficult to find summary indicators that specifically distinguish the working experiences of the two generations that are the focus of this paper.

Thus, even a brief review of patterns of crude indicators of health (at least as represented by life expectancy and mortality), family formation and employment points to major social changes that are likely to have distinguished the lives and expectations our two cohorts of women. The older cohort were born in the early 1930s ( $93 \%$ in 1931 and 1932) and would have been affected in infancy by the Depression of 1933. They were born to a generation of women still experiencing high maternal mortality, some of it attributed to (illegal) termination of pregnancy (Report 1936, cited in Charlton, 1997, p. 11). Women born in the early 1930s in Britain experienced the austerity of war-time (1939-1945) and post-war Britain during the early years of their lives. Some too faced distruption of their family lives as a result of war-time evacuation (indeed this affected nearly $40 \%$ of men and women of this age in our sample). Most went on to marry and have children in the 'boom years' of the 1950s and early 1960s, when conventional ideology about 'traditional' roles for women was at its height (see, for example, Segal, 1990).

The younger cohort were born at the beginning of the 1950s ( $92 \%$ were born in 1950 and 1951) at the tail end of the post-war 'baby boom' in Britain. This cohort thus grew up at a time when investment in social welfare, including the establishment of the National Health Service (NHS), gave them access to public health care and increasing education opportunities (especially for women). The cohort were in
their teens in the late 1960s when there was considerable challenge to the social order, including a major resurgence of activism around feminism. They entered their early adult lives at a time when sexual mores and expectations about marriage and family formation were beginning to be publicly challenged. These women were in the early part of their reproductive lives at a time of significant changes in the provision and legal availability of contraception and abortion. Oral contraception (OCs) became available in the early 1960s; and the Abortion Act, which liberalised the legal grounds for abortion, took effect in both Scotland and England and Wales in 1968. In the early 1970s access to more efficacious methods (such as OCs and the intrauterine device) became more freely available to women in all social groups. At around the same time (1972), male sterilisation became available on the NHS. Thus this cohort were one of the first to have access to oral contraception and greater control over their fertility for the majority of their reproductive lives (Hunt, 1990).

Many of the women in the early 1950s cohort will have grown up with an expectation of working outside the home, and others will have become increasingly aware of the necessity of paid employment as divorce (and lone parenthood) increased and the reality of a 'family wage' waned (Walby, 1997). Most of these women's working lives has postdated the introduction of legislation that was intended to minimise or abolish discrimination in the workplace, although recent evidence ably demonstrates that pay differentials between men and women are still substantial and widespread despite this legislation (Rake, 2000).

However, as Popay and Groves suggest, changes in patterns of employment and family life over time signal a
"transformation in the contours of gender inequalities. But while the morphology of gender inequalities may be transformed, all the evidence points to their continued significance" (Popay and Groves, 2000, p. 85).
We now turn to examine the relationships between aspects of gender and health in these two generations of women in the Twenty-07 Study. Given the changes outlined above we hypothesized that gender-related attitudes and experiences would differ markedly, and that these may be differentially related to health.

We have previously investigated the relationship between 'masculinity' and 'femininity' scores derived from a measure of gender role orientation that has been widely used within psychology (see below for a more detailed description) and a number of health outcomes in an
earlier analysis of women (and men) from the 1950s cohort (Annandale and Hunt, 1990). In that cohort higher masculinity scores tended to be associated with better health outcomes for symptoms and mental health.

We wanted to compare results for women from the earlier (1930s) cohort who would have experienced different expectations of themselves as women. We speculated that the relationships may differ between the cohorts, and specifically that changes in gender relations may result in higher masculinity scores being associated with greater benefits for psycho-social health amongst women in the younger group. The underlying reasoning here is that many of these 'masculine' characteristics have been positively valued by British society (at least amongst men), but their expression by women from the younger generation may be less strongly sanctioned, given changes and challenges to gender role expectations, than amongst older women who became adults during a period of more rigid normative expectations of gender. We saw little relationship between femininity scores and various measures of health in our earlier analysis (Annandale and Hunt, 1990); we speculated that the relationships between 'femininity' and health may be stronger in the older cohort.

Links between masculinity and health risks have been examined amongst men (Courtenay, 2000), but we wished to examine the hypothesis that smoking and consumption of alcohol would be related to masculinity amongst women. A recent study of men and women who were full-time employees in two white collar organisations has reported an association between masculinity scores and smoking in both sexes (Emslie et al., 2002). However, in this population smoking was not related to femininity scores. In recent years, however, researchers have highlighted the increasing feminisation of smoking (see, for example, Elliott, 2000a; Elliott, 2000b; Graham, 1987; Graham, 1996), and thus we also wished to test whether higher femininity scores were related to smoking in women from the general population (by contrast with women in full-time employment).

## 4. The survey participants

Participants in the West of Scotland Twenty-07 Study were sampled from a socially varied but mainly urban area centred on the city of

Glasgow in the West of Scotland, and initial sample sizes in 1987/8 were around 1000 men and women per cohort. Respondents completed lengthy interviews in 1987/8 and on two subsequent occasions in 1990/1 and 1995/6. All interviews were conducted by nurses in the two later periods, and all respondents took part in two interviews (one conducted by a qualified nurse) in the baseline interviews. In 1987/8, interviews were completed for 568 women in the 1930s cohort (aged around 55) and 541 women in the 1950s cohort (aged around 35). In 1995/6 400 women in the 1930s cohort (then aged around 63 years) and 423 women in the 1950 s cohort (then around 43 years) were reinterviewed. Reasons for attrition varied between the two cohorts: taking men and women together, more were attributable to deaths ( $8 \%$ of original sample) and refusals ( $16 \%$ ) in the 1930s cohort than in the 1950s cohort ( $1 \%$ and $9 \%$ respectively). Fewer from the older cohort had moved away ( $4 \%$ compared with $7 \%$ in the 1950 s cohort) or were uncontactable ( $2 \%$ compared with $6 \%$ in the 1950s cohort). Further details on the sample and methods are available elsewhere (Der, 1998; Ecob, 1987; Ford et al., 1994).

A wide range of measures of self reported health and health behaviour, of physical development and functioning, and of personal and social circumstances, has been collected at each wave of interview. The health outcomes that we report here are: three sets of self-reported symptoms (total number of symptoms experienced in the month prior to interview, total number of malaise symptoms, and total number of physical symptoms; since the distribution of these outcomes is positively skewed, these variables have been transformed by taking the square root), and mental health as indicated by scores on the Hospital Anxiety and Depression Scale (HADS) (Zigmond and Snaith, 1983). These outcomes were chosen as they have been more consistently shown to differ between men and women (Macintyre et al., 1996). The two health-related behaviours that we consider are current smoking (current cigarette smokers as compared with ex- and never-smokers) and consumption of alcohol in the week prior to interview (a dichotomous variable indicating whether a woman drank more than a commonly used 'recommended' upper limit \{more than 14 units per week $\}$, and number of units of alcohol consumed in the previous week).

## 5. Studying gender in the Twenty-07 Study

From the 1970s onwards, there has been considerable interest in gender and health, particularly in Western Europe and the USA, fostered both by second wave feminism and by an increasing interest in inequalities in the health of different groups in society (Hunt and Annandale, 1999). From its inception, the Twenty-07 study has had gender as a main area of interest. We have previously reported on various analyses of gender and health in the study, including: on gender, employment and health (Hunt and Annandale, 1993; Hunt and Emslie, 1998); on overall gender differences in health (Macintyre et al., 1999; Macintyre et al., 1996); on gender and primary care consultation (Hunt et al., 1999; Wyke et al., 1998); and on the relationship between gender role orientation and health in the 1950s cohort (Annandale and Hunt, 1990).

As noted earlier, much research in the 'role' tradition from the 1970s and early 1980s was limited by insensitive measurement of variables such as work experience and gender (see Annandale, 1998; Annandale and Hunt, 2000 for more detail). The Twenty-07 Study took account of occupancy and experience of various roles. For example, in relation to gender we studied not only the experience of being male or female but also gender role ideology and dimensions of 'maleness' or 'femaleness' (Annandale and Hunt, 1990). The study used a measure of gender role orientation (GRO), the Bem Sex Role Inventory (BSRI) (Bem, 1981), which had been developed and widely used within psychology (mainly in North America), though little used in relation to self-assessed health, physical health and health behaviours, or within other traditions of social science research. As this is a major focus of this paper, we outline some key features here, but more detail about its derivation (Bem, 1981) and its implementation in this study (Annandale and Hunt, 1990) is given elsewhere.

The BSRI was developed in the early 1970s in the United States, and is premised on the assumption that masculinity and femininity are both conceptually and empirically independent. It thus challenged earlier notions of masculinity and femininity as opposite and mutually exclusive domains. It relies on an individual's endorsement of a series of adjectives or characteristics which have been judged to be culturally characteristic of either males or females. In the original derivation of the BSRI in 1972, potential items which were judged to be "positive in
value and either feminine or masculine in tone" (Bem, 1981, p. 11) were rated by male and female judges in terms of their desirability 'for a man' or 'for a woman' in contemporary American society. A characteristic was defined as 'masculine' if independently judged by both men and women to be significantly more desirable for men, and vice versa for women. Of the 76 characteristics which met this criterion, 40 (20 'masculine' and 20 'feminine') were selected for the Original Form of the BSRI. The 'Short Form' (which is the version used in this study) has 30 items, 10 of which constitute the 'masculinity' scale (Defend my own beliefs, Independent, Assertive, Strong Personality, Forceful, Have leadership abilities, Willing to take risks, Dominant, Willing to take a stand, Aggressive) and 10 for the 'femininity' scale (Affectionate, Sympathetic, Sensitive to the needs of others, Understanding, Compassionate, Eager to soothe hurt feelings, Warm, Tender, Loves children, Gentle) (Bem, 1981). The remaining 10 items are 'filler' items. Given our concerns that these items may no longer be seen as socially desirable for men or for women (as appropriate) in a different country in the 1980s and 1990s, a validation of the items was undertaken in 1992 in the west of Scotland. This suggested that the items contributing to the masculinity scale were generally still considered to be stereotypically 'male', and that the items contributing to the femininity scale were generally still considered to be stereotypically 'female' (Stroebele, 1992).

The BSRI is administered as a self-completion questionnaire in which respondents are asked to indicate the appropriateness of each of the 30 items as a self-descriptor by assigning a score from 1 ('never or almost never true') to 7 ('always or almost always true'). Analyses of data from the BSRI in this cohort have shown: a) high levels of internal consistency for the masculinity and femininity scales (for example, in 1987/8 the Cronbach's alpha for the masculinity scale was 0.85 amongst the 1950s cohort and 0.84 for the 1930s cohort); b) relatively low correlations between the masculinity and femininity scales (correlation coefficients were 0.10 for men and 0.15 for women in the 1950s cohort; equivalent figures for the 1930s cohort were 0.12 and 0.10 ), demonstrating the statistical independence of the two scales as intended by Bem; c) in factor analyses the femininity items load on a single factor, and the masculinity items on a separate factor in both these age cohorts, with none of the items from the masculinity scale loading
strongly on the femininity scale, and vice versa (Hunt and Sweeting, 1996).

In an earlier publication, we examined whether sex (i.e. male/female) differences in various aspects of health were affected when gender role orientation was taken into account (Annandale and Hunt, 1990). At that time, we argued that although a distinction had long been made between biological sex and sociological gender at a theoretical level, sex and gender were often conflated in empirical work. This analysis suggested that higher masculinity scores, as measured on the BSRI, were associated with relatively good health (as represented by two measures of mental health, self-assessed general health, and the number of self-reported symptoms) in both men and women. The relationship, if any, between GRO and health behaviours was not examined, although we have since examined GRO and smoking in men and women in all three cohorts of the Twenty-07 study (Hunt et al., in press) and GRO and health behaviours in other populations (Emslie et al., 2002).

## 6. Analysis

The focus of the analysis presented here is a) to examine whether there are differences in the gender-related attitudes and gender role orientations of the two cohorts of women, and b) to see whether indicators of gender role orientation are related to health and health behaviour in the two cohorts.

Chi-square values are used to assess the significance of differences in distributions on attitudes to traditional gender roles (and reported material conditions in early life). Linear regression was used to examine the relationship between the masculinity, and femininity, scores and the continuous health outcomes and number of units of alcohol consumed in the previous week. Where the distribution of the outcome variables was skewed, the variable was transformed (by taking the square root) to achieve a more normally distributed outcome. Logistic regression models were used for the categorical outcomes (being a current smoker, and drinking in excess of the recommended alcohol limit). We report here linear regression coefficients or odds ratios (as appropriate) unadjusted for any other factors, then adjusted for social class, employment status, marital status (key gender-related factors which are
known to affect health and to have different distributions in the two cohorts) and the other GRO score (i.e. femininity for the models examining the effect of masculinity, and vice versa).

## 7. Results

### 7.1. Comparing the earlier lives and attitudes of two generations of women

The summary of changes in expectations and circumstances above suggests that there should be some quite marked differences in genderrelated experiences of these two cohorts of women. The Twenty-07 study shows clear differences in family formation patterns for the two cohorts (Table 1). Women in the younger (1950s) cohort married and had their first child at younger ages than women in the older cohort. At entry to the study, the majority of women ( $69 \%$ of the 1930s cohort and $79 \%$ of the 1950 s cohort) were married; slightly more of the younger women had never married ( $10 \%$ vs. $7 \%$ ), and $15 \%$ of the older cohort were already widowed.

In the 1995/6 interview, respondents were asked about their attitudes towards gender roles. The women in the 1930s cohort expressed much more traditional views about gender roles than women in the 1950s cohort (Table 2). More than three-quarters of women in the younger age group (aged mid 40s) disagreed with the statement that 'A husband's job is to earn the money; a wife's job is to look after the home and family', as compared with less than half of the older women (aged mid 60 s ). Similarly, more than $75 \%$ of the younger women (as compared with less than $60 \%$ of older women) disagreed with the statement that 'Some equality in marriage is a good thing, but by and large the husband ought to have the main say-so in family matters'. Conversely, almost a quarter of the older women endorsed this statement. Younger women were also much less likely to endorse the statement that 'Women rather than men should look after relatives who need care' ( $11 \%$ of women in their mid- 40 s compared with $29 \%$ of women in their mid 60 s agreed with this statement). Differences between the two groups of women were less marked for the statement that 'All in all, family life suffers when the woman has a full-time job', although
the older women were significantly more likely to endorse a more 'traditional' view.

Table 1
Family formation patterns, marital and employment status in 1987/8 by cohort

|  | 1930s cohort (\%) <br> $(n=568)$ | 1950s cohort (\%) <br> $(n=541)$ |
| :--- | :---: | :---: |
| Age at first marriage |  |  |
| Never married | 7 | 10 |
| $16-20$ | 16 | 39 |
| $21-24$ | 47 | 38 |
| 25+ | 30 | 13 |
| Age at first birth |  |  |
| No children | 18 | 13 |
| 15-19 | 6 | 16 |
| 20-24 | 38 | 38 |
| 25-29 | 32 | 24 |
| 30+ | 7 | 8 |
| Employment status | 47 | 65 |
| In paid work | 35 | 24 |
| Looking after home | 9 | 1 |
| Disabled | 4 | 7 |
| Unemployed | 4 | 0 |
| Retired | 0 | 2 |
| Other |  |  |
| Marital status | 69 | 79 |
| Currently married |  |  |
| Previously married | 2 | 4 |
| - Separated | 8 | 9 |
| - Divorced | 15 | 0 |
| - Widowed | 7 | 10 |
| Never married |  |  |

However, it is important to remember that there are also substantial other differences between the two cohorts of women in their earlier circumstances and experience, quite apart from gender-related roles and attitudes. Recent interest in the effects of exposure to adverse circumstances in early life and to cumulative disadvantage throughout life

Table 2
Women's attitudes to traditional gender roles in 1995/6 by cohort


(see, for example, Graham, 2000; Kuh and Ben-Shlomo, 1997; Power and Matthews, 1997) suggests that these may have longstanding effects on health, and other evidence suggests that health behaviours may be influenced by earlier life experiences (Hunt et al., 2000). Differences in the experiences of the two cohorts, as reported in a retrospective section of the interview in 1995/6, are apparent even from the time of birth (for example, $74 \%$ of the older women were born at home; 20 years later hospital births were already more prominent and just a third of the younger women were born at home, $\mathrm{p}<0.0001$ ). Twice as many of the older women ( $24 \%$ vs. $13 \%, \mathrm{p}<0.0001$ ) reported that their father had been unemployed for a significant length of time (i.e. more than 6 months) during their childhood. There are marked contrasts between the two cohorts in indicators of material conditions in childhood and earlier adult life (see Table 3). About half of the older women reported that they had lived in a house which did not have an inside toilet, or a regular fixed supply of hot water, or a bath or shower during their childhood, and around $85 \%$ grew up in a household without a car. Similarly in adult life, around a third of the older women reported that they had lived for some time in a house without these facilities. More of the younger women reported always living in households with these facilities both in childhood and in their adult life, although it is worth noting that, even for this post-war generation, a third had lived, at some time in their childhood, in a house without an inside toilet or a bath or shower.

In contrast, there were no differences between the two cohorts of women in their ratings of various psychosocial factors in childhood. For example, their retrospective ratings of happiness as a young child did not differ, nor were there differences in ratings of the quality of their time spent either at primary school or at secondary school (data not shown). However, more than twice as many of the older women reported that their schooling had been disrupted by illness ( $16 \%$ of the older women compared with $6 \%(\mathrm{p}<0.0001)$ of the younger women said that they had missed school for a considerable time because of illness) and around $40 \%$ of the older women experienced the disruption of evacuation during the War.

Table 3
Material conditions earlier in life of women ${ }^{a}$ by cohort

|  | Cohort | $\begin{gathered} \text { Yes } \\ \text { (row \%) } \end{gathered}$ | $\begin{gathered} \text { No } \\ \text { (row \%) } \end{gathered}$ | Total $n$ | $\chi^{2}$ (degs of freedom) $p$ value |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Childhood <br> Throughout your childbood did you ever live in a house or home which did not have: <br> An inside toilet |  |  |  |  |  |
|  |  |  |  |  |  |
|  | 1950s | 34 | 66 | 423 | 11.28 (1) |
|  | 1930s | 46 | 54 | 400 | $p<0.001$ |
| A regular fixed supply of hot water | 1950s | 26 | 74 | 422 | 57.21 (1) |
|  | 1930s | 52 | 48 | 400 | $p<0.0001$ |
| A bath or shower | 1950s | 38 | 62 | 422 | 27.02 (1) |
|  | 1930s | 57 | 44 | 400 | $p<0.0001$ |
| Throughout your childhood (up to the age of 15) did your family ever own a car? | 1950s | 45 | 55 | 422 | 83.98 (1) |
|  | 1930s | 16 | 85 | 400 | $p<0.0001$ |
|  |  |  |  |  |  |
| Adulthood <br> As an adult, did you ever live in a house which did not have: |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| An inside toilet | 1950s | 13 | 87 | 423 | 46.70 (1) |
|  | 1930s | 33 | 67 | 400 | $p<0.0001$ |
| A regular fixed supply of hot water | 1950s | 9 | 91 | 423 | 63.29 (1) |
|  | 1930s | 31 | 69 | 400 | $p<0.0001$ |
| A bath or shower | 1950s | 18 | 83 | 423 | 54.12 (1) |
|  | 1930s | 41 | 59 | 400 | $p<0.0001$ |

a As reported at interview in 1995/96.

### 7.2. Gender role orientation, health and health behaviour

There were few differences between the two cohorts in their mean scores on the GRO scales, and any differences seen were small and not statistically significant (Table 4). Women in the younger (1950s) cohort had slightly lower mean femininity scores than older women both

Table 4
Masculinity and femininity scores at wave $1(1987 / 8)$ and wave $3(1995 / 6)$ for women by cohort ( $n$, median, mean, standard deviation, skewness and kurtosis)

|  | Cohort | $n$ | Median | Mean | Std. Dev | Skewness | Kurtosis |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wave 1 (1987/8) |  |  |  |  |  |  |  |
| Masculinity score | 1950s | 497 | $\begin{array}{r} 4.10 \\ { }^{9} 4.10 \end{array}$ | $\begin{array}{r} 4.04 \\ { }^{a} 4.03 \end{array}$ | . 91 | . 015 | -. 098 |
|  | 1930s | 511 | $\begin{gathered} 4.00 \\ { }^{a} 4.10 \end{gathered}$ | $\begin{array}{r} 4.08 \\ { }^{a} 4.09 \end{array}$ | . 93 | . 130 | -. 454 |
| Femininity score | 1950s | 497 | $\begin{array}{r} 5.60 \\ { }^{a} 5.60 \end{array}$ | $\begin{array}{r} 5.52 \\ { }^{9} 5.53 \end{array}$ | . 77 | -. 532 | -. 017 |
|  | 1930s | 511 | $\begin{array}{r} 5.70 \\ { }^{5} 5.70 \end{array}$ | $\begin{array}{r} 5.63 \\ { }^{9} 5.61 \end{array}$ | . 69 | -. 601 | . 795 |
| Wave 3 (1995/6) |  |  |  |  |  |  |  |
| Masculinity score | 1950s | 390 | 4.30 | 4.26 | . 86 | -. 292 | -. 079 |
|  | 1930s | 354 | 4.20 | 4.18 | . 91 | -. 049 | -. 214 |
| Femininity score | $\begin{aligned} & \text { 1950s } \\ & \text { 1930s } \end{aligned}$ | $\begin{aligned} & 390 \\ & 356 \end{aligned}$ | $\begin{aligned} & 5.60 \\ & 5.70 \end{aligned}$ | $\begin{aligned} & 5.57 \\ & 5.63 \end{aligned}$ | $\begin{array}{r} .68 \\ .77 \end{array}$ | $\begin{array}{r} -.415 \\ -1.063 \end{array}$ | $\begin{array}{r} .329 \\ 2.221 \end{array}$ |

a Median/mean calculated for the subset of $1^{\text {st }}$ wave respondents who were also interviewed in wave 3 .

Table 5
Paired $t$-tests between waves $1\left(1988 / 7, t_{1}\right)$ and $3\left(1995 / 6, t_{3}\right)$ for masculinity and femininity scores

|  | 1950s cohort |  | 1930s cohort |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $t_{1}-t_{3}$ |  | $t_{1}-t_{3}$ |  |
| Paired $t$-tests | Diff. $^{a}$ | $p$ | Diff. $^{a}$ | $p$ |
| Masculinity scale | -.231 | $* * *$ | -.090 | n.s. |
| Femininity scale | -.040 | n.s. | -.026 | n.s. |
| Correlations | Correl. coeff. | $p$ | Correl. coeff. | $p$ |
| Masculinity scale | .647 | $* * *$ | .676 | $* * *$ |
| Femininity scale | .581 | $* * *$ | .633 | $* * *$ |

a A negative difference indicates a higher mean score at later time point.
${ }^{* * *} p<0.001$; n.s. not significant.
when interviewed in 1987/8 (at entry to the study) and in 1995/6. Their mean masculinity scores did not differ (4.04 for 1950s cohort vs. 4.08 for 1930 s cohort) in the earlier interviews and were slightly higher ( 4.26 vs. 4.18 ) in the later (1995/6) interviews. Longitudinal analyses demonstrate a high degree of consistency in people's scores over a 7year period (1987/8 to $1995 / 6$ ) (Table 5). When comparing scores at the two time points, correlation coefficients were high both for the masculinity score, and for the femininity score, in both age cohorts. A comparison of scores at the two time periods (using paired $t$-tests) showed a small but significant increase in masculinity score over time in the younger cohort only (Table 5). Analysis of the relationships between masculinity and femininity scores and various indicators of health presented below use data collected in 1995/6.

Results for masculinity scores are presented for the two cohorts in Table 6, both before and after adjustment for femininity score, women's social class, employment status and marital status. The two most striking features of these results are: (a) there are few relationships between masculinity scores and the indicators of mental health and symptom scores, and (b) where any significant relationships are observed there is no consistency between the two cohorts of women. Thus, in general, the tendency for women (and men) with higher masculinity scores to have more positive health which we observed when

Table 6
Prediction for various health outcomes and behaviours
by Bem masculinity score, unadjusted and adjusted for femininity score, social class, employment status and marital status.
OR: Odds ratio; b1, b2: linear regression coefficients for linear and squared terms respectively

|  |  | Masculinity score |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1950s cohort |  | 1930s cohort |  |
|  |  | Unadjusted | Adjusted | Unadjusted | Adjusted |
| Health <br> Anxiety score |  |  |  |  |  |
|  | b1 | $\begin{aligned} & .02 \\ & .13 \end{aligned}$ | $\begin{array}{r} -.06 \\ .04 \end{array}$ | $\begin{aligned} & -.01 \\ & .54^{* *} \end{aligned}$ | $\begin{aligned} & .14 \\ & .56^{* *} \end{aligned}$ |
| Depression score ${ }^{a}$ | b1 | -. 03 | -. 01 | -. 09 | -. 04 |
|  | b2 | . 07 | . 05 | .08* | .09* |
| Total symptom score ${ }^{a}$ | b1 | -. 08 | -. 06 | -. 01 | . 02 |
| Malaise symptom score ${ }^{a}$ | b1 | -.12* | -.12* | -. 00 | . 01 |
|  | b2 | . 01 | -. 01 | .10* | .10* |
| Physical symptom score ${ }^{\text {a }}$ | b1 | -. 02 | . 00 | . 05 | . 07 |
| Health behaviours |  |  |  |  |  |
| Current smoker | OR | 1.27* | 1.27 | 1.02 | 1.09 |
| Drinks in excess of recommended alcohol limit | OR | 1.31 | 1.26 | 1.59 | 1.57 |
| Number of units of alcohol in previous week | b1 | . $22^{* *}$ | .21* | . 11 | . 06 |

* $p<0.05 ; * * p<0.01$.
$a$ Variable transformed by taking square root.
analysing data from the 1950s cohort at entry to the study (in 1987/8) (Annandale and Hunt, 1990) was not replicated in this analysis. In the younger (1950s) cohort, only malaise symptoms were significantly related to masculinity scores (with higher masculinity scores associated with decreased malaise as expected given our earlier report of better health in those with higher masculinity scores (Annandale and Hunt, 1990). Amongst the older cohort, the relationships, where seen, were not linear, but curvilinear. For the two measures of mental health (de-
pression and anxiety scores) and for malaise symptoms, it was women with the lowest and highest scores who had poorer health on these measures, whereas women with intermediate masculinity scores fared better on the health indicators.

Table 7
Prediction of various health outcomes and behaviours
by Bem femininity score, unadjusted and adjusted for masculinity score, social class, employment status and marital status.
OR: Odds ratio; b1, b2: linear regression coefficients for linear and squared terms respectively

|  |  | Femininity score |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1950s cohort |  | 1930s cohort |  |
|  |  | Unadjusted | Adjusted | Unadjusted | Adjusted |
| Health |  |  |  |  |  |
| Anxiety score | $\begin{aligned} & \mathrm{b} 1 \\ & \mathrm{~b} 2 \end{aligned}$ | $\begin{aligned} & .72^{*} \\ & .60^{*} \end{aligned}$ | $\begin{aligned} & .58^{*} \\ & .59^{*} \end{aligned}$ | $\begin{gathered} -.32 \\ -.08 \end{gathered}$ | $\begin{aligned} & -.21 \\ & -.23 \end{aligned}$ |
| Depression score ${ }^{a}$ | $\begin{aligned} & \mathrm{b} 1 \\ & \text { b2 } \end{aligned}$ | $\begin{array}{r} -.03 \\ .09 \end{array}$ | $\begin{array}{r} -.07 \\ .08 \end{array}$ | $\begin{aligned} & -.15^{* *} \\ & -.05 \end{aligned}$ | $\begin{gathered} -.12^{*} \\ .09^{*} \end{gathered}$ |
| Total symptom score ${ }^{\text {a }}$ | b1 | . 05 | -. 02 | . 03 | . 02 |
| Malaise symptom score ${ }^{a}$ | b1 | . 06 | . 06 | . 07 | . 08 |
| Physical symptom score ${ }^{\text {a }}$ | b1 | . 03 | -. 02 | . 00 | -. 02 |
| Health behaviours |  |  |  |  |  |
| Current smoker | OR | 1.69*** | 1.46* | 1.04 | 1.12 |
| Drinks in excess of recommended alcohol limit | OR | . 83 | . 78 | . 81 | . 75 |
| Number of units of alcohol in previous week | b1 | -. 17 | -. 18 | -. 021 | . 03 |

* $p<0.05$; ** $p<0.01$.
$a$ Variable transformed by taking square root.

The health behaviour variables were more consistently associated with masculinity scores in the younger group of women, with higher scores associated with higher rates of smoking and higher alcohol consumption (although the odds ratio was not significantly elevated for
drinking in excess of recommended levels). There was no relationship between masculinity and smoking amongst women in their early 60 s in the 1930s cohort, and no significant relationship with either of the measures of alcohol consumption (although again there was a nonsignificant trend for those drinking over the recommended alcohol limit to have higher masculinity scores).

Again there were few significant relationships between femininity scores and health and health behaviour (Table 7), although higher femininity scores were significantly associated with higher scores on the anxiety score measure in the 1950s cohort. The strongest relationship was between femininity score and smoking in the younger (1950s) cohort; women who were current smokers had higher femininity scores. (The relationship between class, GRO and smoking in men and women in the 1930s, 1950s and 1970s cohorts in the face of general trends in smoking by class and gender has been explored in more detail elsewhere) (Hunt et al., in preparation).

## 8. Discussion

The data presented here demonstrate very marked differences in indicators of gender-related attitudes and patterns of family formation (and reported material circumstances early in life) in two cohorts of women born just twenty years apart living within the same geographical locale. However, masculinity and femininity scores on a measure of gender role orientation did not differ greatly.

Relationships between these measures of gender role orientation and various aspects of health and health behaviour were weak, but differed between the two cohorts. Relatively few of the health outcomes examined were related to masculinity and femininity scores either before or after adjustment for other factors. Of most interest are the strong associations between higher scores on both the masculinity and femininity scales and smoking for women born in the early 1950s cohort. After adjustment for social class, employment status, marital status, and femininity score, a one point increase in masculinity score was associated with a $27 \%$ increase in the odds of being a smoker; the equivalent figure for a one point increase in femininity score was a $46 \%$ increase in the odds of being a smoker. Whilst it may seem coun-ter-intuitive that both high masculinity scores and high femininity
scores are related to smoking in the 1950s cohort, this is less surprising in the light of current research on the complex gender-related processes which were involved in drawing different sectors of women into the smoking market. It is hoped that current historical and qualitative research on gendered identities and smoking amongst women which is ongoing in the west of Scotland may shed further light on these observations (Elliott, 2000a; Elliott, 2000b).

This paper shows: first, a diversity in experiences (e.g. patterns of marriage and reproduction, and material conditions in early life) that are likely to be very salient to the construction of gender and to the aetiology of health, even between cohorts born just 20 years apart; and secondly, that relationships between measures of gender role orientation and health, though not strong, differ for the two generations examined. In many quantitative examinations of gender or other dimensions of inequality in health, this diversity and difference would not be apparent a) because more detailed examination of various manifestations of gender over time are seldom possible within quantitative studies of health, and b) because it is commonplace (often to maximise statistical power and generalisability) to group together people within quite wide age bands, and thus to ignore or obscure important axes of heterogeneity and complexity. Thus, the lack of consistency observed here could reflect important changes in gender relations, or could reflect the vagaries of chance and a lack of statistical power to sustain more complex models.

There has been an increasing focus in recent years on the need to look at diversity amongst men and amongst women, by factors such as socio-economic status, employment status, or ethnicity. At the outset of this study we included a measure of gender role orientation, the Bem Sex Role Inventory, as another potential indicator of diversity among men and among women. We had intended to examine changes in occupancy of gender-related roles in relation to changes in gender role orientation, and to examine both in relation to health. Analysis of masculinity and femininity scores over time (data were examined over seven years), however, showed that the differences in people's gender role orientation scores were too small for robust analyses of change. Also, as demonstrated here, relationships between gender role orientation and various health measures were weak, although somewhat stronger relationships were seen for two key health behaviours.

In research on gender and health little attention has focused on trying to encapsulate and examine changes at a societal level, particularly in the policies and attitudes which affect gender relations in society. That these can occur over a short period of historical time is widely evidenced; yet seldom do empirical studies of gender and health take account of the social relations of gender at the 'macro-social' level; as Kawachi et al. have noted, a 'society and health' lens has been lacking (Kawachi et al., 1999). Developing indicators of such change at a macro-social level presents another major challenge.

The data presented here raise methodological challenges for future research. How can diversity in the experience of being female (or male) at times of very different gender relations be operationalised in quantitative analyses? In an article which primarily focuses on the role of social system influences on gender differences in heart disease, McKinlay has noted that
"Epidemiologists customarily overlook the effects of social structural system influences on the distribution of diseases in human populations" (McKinlay, 1996, p. 7).
Improvements in statistical techniques, he continues, have helped to clarify the independent contributions of highly correlated variables such as education and race and:
"The increasing availability of large epidemiological databases, along with improved computing technology to manipulate these data, permits even further explanatory refinements. However, even when we are fairly certain that a specific factor (e.g. gender or education) contributes independently to health status or illness behaviour, we must keep in mind that that factor simply summarises complex information about a person's life" (p. 5).
Popay and colleagues have asserted that:
"Existing methods [in the dominant quantitative research paradigm] are simply not up to grasping the complexity inherent in the processes which shape health and illness [and therefore] epidemiologist's empirical investigations ... have left them dealing with surface appearances only .. which leaves the question of the social structure unquestioned" (Popay et al., 1998).
Popay and Groves argue that, by contrast, qualitative research
"offers a means of exploring the relationship between agency and structures - that is between differences and divisions. In so doing, we suggest, this type of research points to the way in which patriarchal
ideologies and structures - albeit alongside and interacting with other social divisions - continue to mould women's and men's lives differently" (Popay and Groves, 2000, p. 64-65).
Qualitative research (see, for example, Graham, 1984; Walters and Charles, 1997) has indeed illustrated the way in which women's experiences of the prevailing normative gender relations can profoundly affect their experiences of health. Yet, if the debate on gender and health is to move forward, both qualitative and quantitative research needs to take more account of research from both traditions and to the macrosocial context of the research. As Rieker and Bird note "As with all research, conclusions are shaped by the research questions asked and by the definitions and measures of gender and health" (Rieker and Bird, 2000, p. 104). If we do not ask whether the specificity of historical time fundamentally changes relationships between indicators of the gendered experiences of women (and men), be it employment, parenthood, or marriage, and find ways to develop and incorporate more subtle measures of such changes, then we will be limited in the extent to which we can uncover the complexities of when and how such experiences accrue benefits or threats to health.

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# THE INFLUENCE OF WORK, HOUSEHOLD STRUCTURE, AND SOCIAL, PERSONAL AND MATERIAL RESOURCES ON GENDER DIFFERENCES IN HEALTH: <br> AN ANALYSIS OF THE 1994 CANADIAN NATIONAL POPULATION HEALTH SURVEY* 

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#### Abstract

Data from the 1994 Canadian National Population Health Survey (NPHS) do not confirm the widespread assumption that women experience considerably more ill bealth than men. The patterns vary by condition and age and at many ages, the health of women and men is more similar than is often assumed. However, we should not minimize the gender differences that do exist and in this paper we focus on three bealth problems which are more common among women: distress, migraine and arthritis/rbeumatism. We consider to what extent work, household structure and social, personal and material resources explain these gender differences in bealth. Analysis of the distributions of paid work conditions, household circumstances and resources reveal mostly minor differences by gender and differences in exposure to these circumstances


[^6]contribute little to understanding gender differences in health. There is also little evidence that greater vulnerability is a generalized bealth response of women to paid and household circumstances. We find limited evidence that social, personal and material resources are involved in pathways linking work and home circumstances to bealth in ways that differ between the sexes. In conclusion, we consider some reasons for the lack of support for our explanatory model: the measures available in the NPHS data set which contains little information on the household itself; the difficulty of separating 'gender' from the social and material conditions of men's and women's lives; and changes in women's and men's roles which may have led to a narrowing of differences in bealth.

Keywords: Gender, Men, Social determinants of health, Women, Work, Canada.

## Résumé

Les données de l'Enquête Nationale sur la Santé de la Population (ENSP) menée au Canada en 1994 ne corroborent pas l'idée largement répandue que la santé des femmes est nettement moins bonne que celle des hommes. La situation varie selon l'âge et la condition sociale, et, dans de nombreux groupes d'âge, la santé des femmes et celle des hommes se différencient moins qu'on ne le pense souvent. Mais il ne faut pas pour autant minimiser les différences existantes, et les auteurs de cette communication se penchent sur trois problèmes de santé qui touchent plus fréquemment les femmes que les hommes : l'angoisse, la migraine et l'artbritisme/ rbumatisme. Ils s'agit d'examiner dans quelle mesure le travail, la structure du ménage et les ressources sociales, personnelles et matérielles expliquent ces différences de santé entre hommes et femmes. L'analyse des conditions de travail et de la situation et des ressources du ménage ne révèle que des différences généralement mineures entre sexes, et les différences d'exposition à ces divers contextes n'apportent pas grand-chose à l'explication des différences de santé. Les données ne permettent guère d'affirmer qu'une plus grande vulnérabilité serait la réponse généralisée des femmes à leurs conditions de vie à la maison et au travail. Elles n'indiquent pas davantage que les ressources sociales, personnelles et matérielles seraient impliquées d'une manière différente pour chaque sexe dans les mécanismes qui relient les conditions de vie professionnelle et familiale à la santé. En conclusion, les auteurs examinent quelques-unes des raisons pour lesquelles leur modèle explicatif rencontre sipeu de confirmation dans la réalité : les variables présentes dans l'ENSP qui donnentpeu d'information sur le ménage lui-même, la difficulté de faire la distinction entre le «genre» et les conditions sociales et matérielles de vie des hommes et des femmes, et l'évolution des rôles respectifs des deux sexes qui peut avoir entraîné un rétrécissement des écarts en matière de santé.

Mots-clés : Canada, Homme, Femme, Genre, Déterminants sociaux de la santé, Travail.

## 1. Introduction

Recent research has challenged the conventional view that, while women have a longer life expectancy, they experience more ill-health than men (Macintyre et al., 1996; Hunt and Annandale, 1999). It has encouraged researchers to move away from the «relatively undifferentiated model of sex differences» (Macintyre et al., 1996, p. 621) that has dominated research on gender and health. Yet, in rejecting an overgeneralized view of women's morbidity disadvantage, we risk neglecting gender differences in health that are consistent. In this paper we first consider the nature and magnitude of gender differences in health, based on our analysis of the 1994 Canadian National Population Health Survey (NPHS), following which we seek to explain gender differences in health that do exist.

Data from the 1994 NPHS (McDonough et al., 1999a) do not confirm the widespread assumption that women experience considerably more ill health than men. The patterns vary by health problem and age and, overall, support the findings of Macintyre et al. (1996) and other studies reported in a special issue of Social Science and Medicine (Hunt and Annandale, 1999). Table 1 presents information on gender differences for 17 of the health measures included in the NPHS (see Appendix for information on the measures). These include general measures (self rated health status, two week disability, activity restriction, and chronic conditions) as well as specific measures of mental and physical health problems. In some instances there are clear and consistent gender differences yet in others, the differences vary by age or are very small and not significant. Certain problems, like restricted activity and asthma exhibit no gender differences across the age groups. Other measures show variable gender differences: self-rated health, chronic illness, chronic bronchitis/emphysema, cancer, high blood pressure, back problems, heart problems and injuries, with only the two latter more prevalent among men in some age groups.

Table 1
Patterns of gender differences in health ${ }^{a}$, by 10-year age-groups (ages 15-75+)
National Population Health Survey, Canada, 1994

|  |  | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75+ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Female excess at all/ most ages Two week disability |  |  |  |  |  |  |  |  |
|  | m | 5.8** | 5.9** | 5.9* | 4.4** | 4.5 | 4.0 | 3.0** |
|  | f | 11.5 | 9.0 | 8.3 | 9.2 | 5.2 | 6.0 | 10.1 |
| Distress ${ }^{\text {b }}$ | m | 4.19** | 3.50** | 2.99** | 2.82** | 2.42** | 2.11** | 2.14** |
|  | f | 4.98 | 4.02 | 3.70 | 3.61 | 3.15 | 3.04 | 3.30 |
| Depression | m | 8.5** | 6.8** | 5.1** | 5.9** | 3.2** | 2.9* | 4.1 |
|  | f | 13.7 | 11.1 | 11.0 | 10.4 | 7.1 | 5.4 | 3.3 |
| Migraine | m | 5.2** | 3.2** | 5.5** | 5.1** | 3.0** | 3.0** | 2.1 |
|  | f | 8.7 | 13.1 | 12.4 | 13.0 | 8.7 | 5.9 | 4.0 |
| Pain | m | 7.5** | 10.2* | 13.7* | 17.5** | 18.1** | 25.4** | 31.2 |
|  | f | 13.3 | 13.1 | 16.9 | 22.8 | 26.1 | 32.2 | 37.3 |
| Arthritis/rheumatism | m | 1.1* | 2.5** | 6.0 | 10.4** | 20.4** | 31.1** | 38.1** |
|  | f | 2.5 | 4.4 | 7.7 | 17.7 | 33.1 | 42.7 | 50.4 |
| Nonfood allergies | m | 21.3 | 19.8 | 15.6** | 12.4** | 12.1** | 8.9** | 6.9* |
|  | f | 23.0 | 22.4 | 21.2 | 17.7 | 17.3 | 15.2 | 11.8 |
| No gender differences |  |  |  |  |  |  |  |  |
| Restricted activity | m | 12.4 | 14.5 | 16.8 | 20.2 | 29.6 | 36.4 | 43.9 |
|  | f | 13.1 | 14.2 | 16.9 | 23.0 | 30.0 | 34.7 | 48.0 |
| Asthma | m | 9.4 | 6.9 | 3.9 | 4.3 | 4.3 | 5.5 | 4.5 |
|  | f | 11.2 | 6.9 | 5.5 | 5.1 | 5.5 | 4.5 | 4.5 |
| $V$ ariable gender differences |  |  |  |  |  |  |  |  |
| Self rated health ${ }^{\text {b }}$ | m | 4.04** | 4.03* | 3.91 | 3.75* | 3.45 | 3.24 | 3.08 |
|  | f | 3.91 | 3.95 | 3.84 | 3.65 | 3.44 | 3.28 | 3.08 |
| Chronic illness | m | 20.5** | 24.2** | 31.5** | 44.4 | 59.5 | 70.3 | 78.9 |
|  | f | 26.8 | 32.3 | 36.6 | 47.2 | 64.1 | 74.0 | 83.6 |
| Chronic bronchitis/ emphysema | m | 0.9** | 1.4* | 1.8** | 1.5** | 5.0 | 6.6 | 9.1 |
|  | f | 3.4 | 2.6 | 3.5 | 3.6 | 4.5 | 4.4 | 7.8 |
| Cancer | m | $0.0{ }^{\text {c }}$ | 0.2* | 0.2** | 0.8** | 2.2 | 5.1 | 5.1 |
|  | f | 0.4 | 0.9 | 1.0 | 3.2 | 3.9 | 4.3 | 5.8 |
| Heart problems | m | 0.1 | 0.2** | 0.9 | 4.4** | 8.6** | 16.8** | 22.1 |
|  | f | 0.6 | 1.3 | 0.5 | 2.1 | 5.0 | 11.1 | 21.6 |
| High blood pressure | m | 0.5 | 1.3 | 4.4 | 9.5 | 18.4 | 24.9* | 20.5** |
|  | f | 0.8 | 1.4 | 3.9 | 10.5 | 22.5 | 30.4 | 36.1 |


| Back problems | m | $5.9^{* *}$ | 12.6 | 14.7 | 19.5 | 22.2 | 18.5 | $14.2^{*}$ |
| :--- | :---: | :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Injuries | f | 9.0 | 12.4 | 14.1 | 16.4 | 20.1 | 18.4 | 19.2 |
|  | m | $29.1^{* *}$ | $25.0^{* *}$ | 18.2 | 14.0 | 11.0 | 7.3 | 7.7 |
|  | f | 22.0 | 15.1 | 16.4 | 13.2 | 11.0 | 9.6 | 11.4 |
|  | m | 1,241 | 1,581 | 1,564 | 1,217 | 879 | 791 | 447 |
|  | f | 1,364 | 1,940 | 1,705 | 1,284 | 1,071 | 1,079 | 826 |

* $p<.05$; ** $p<.01$ significant differences in group means/proportions.
a See Appendix for definitions of each health measure.
$b$ All health conditions refer to the proportion of men and women reporting a specific health condition except for distress and self-rated health which are group means (higher values for distress represent greater distress, higher values for self-rated health represent better health).
c No respondents reported condition.

Nevertheless, despite the absence of stable gender differences in health, some differences between women and men in Canada are fairly consistent (McDonough et al., 1999a). Specifically, women are more likely to report short-term disability, distress, depression, migraine, pain, arthritis or rheumatism, and nonfood allergies. Here, we focus on three of these: distress, a commonly reported mental health problem; migraine, the problem with the greatest magnitude of difference; and arthritis/rheumatism a painful physical health problem which may limit activity. The question which guides our analysis is: to what extent do paid and unpaid work conditions and social, personal and material resources explain these differences in the bealth of women and men? We start by briefly outlining the value of a model of the social production of health which focusses on the structural dimensions of paid and unpaid work, while also taking into account the roles of social support and personal and material resources in the pathways linking work and health.

## 2. Work, resources and health

Paid work is associated, on average, with better physical and mental health for both men and women (Arber, 1997; Ross and Bird, 1994; Waldron, 1991; Walters et al., 1995). Yet such general findings may obscure health differences that emerge from the nature of the job and the social organization of work. Within the demand-control model, for instance, it is argued that production processes that simplify and routinize closely su-
pervised tasks create working conditions that impair health (Karasek and Theorell, 1990). Psychologically demanding jobs in organizational structures that offer individuals little control over their work are positively related to cardiovascular disease (Haan, 1988; Schnall et al., 1994; Theorell et al., 1991), sickness absence (North et al., 1996) and psychological distress (Karasek and Theorell, 1990). But though the health effects of work have been examined extensively for men, there has been much less research on women and on comparisons between women and men (Messing et al., 1995). Jobs performed by women are more likely to be characterized by high psychological demands and low levels of control (Karasek and Theorell, 1990). However, in developing the demand-control model, researchers have argued that other aspects of the social organization of work need to be taken into account in order to more fully reflect the work experiences of women and, maybe, of men in non-traditional occupations. For example, Barnett and Marshall (1991) have argued that interpersonal aspects of work, as well as other types of rewards may be important, including the opportunity to help others in service jobs and some professions. Moreover, issues such as sexual and racial discrimination and harassment have often been neglected (Doyal, 1994; Hall, 1989; Walters et al., 1996).

Much of the literature that takes into account the domestic sphere has addressed the workload of women - that the burden of domestic labour continues to fall primarily on women, even when they are employed (Doyal, 1995; Harvey et al., 1991; Lowe, 1989; Michaelson, 1985). Women engaged in paid work generally have better health than full-time homemakers, yet women's experiences may vary in this regard and reflect variations in occupational roles, family demands and resources (Khlat et al., 2000; Lahelma et al., this volume). Research is starting to include a broader range of these aspects of women's lives (Hall, 1992; Matthews and Power, this volume) and to use similar models for the study of paid work and domestic responsibilities (Griffin et al., this volume; Walters et al., 1997; Walters et al., 1996). Studies are also starting to recognize that men's health may be influenced by their roles within the home (Barnett and Marshall, 1992, 1993; Barnett et al., 1992; Bartley et al., 1992; Griffin et al., this volume; Hall, 1992; Hunt and Annandale, 1993; Walters et al., 1996, 1997). Nevertheless, research on work within the home is still in its infancy. We do not have conceptual frameworks which are as well developed as in the case of paid work, nor are the elements of domestic labour clearly identified (Hunt and Annandale, 1993).

There has been little research examining the particular ways in which job and family conditions affect health. The literature on stress suggests that coping resources, in particular social support and personal characteristics, may be important in this regard. Such resources are said to reflect a "latent dimension of coping because they define a potential for action, but not action itself" (Gore, 1985, p. 266). Perceived emotional support is directly associated with better mental and physical health and it usually reduces the health-damaging effects of negative life events and chronic strains (Kessler and McLeod, 1985; House et al., 1988). Analyses of the association between social support and health typically control for sex and until recently there has been relatively little exploration of gender specific models (Fuhrer and Stansfeld, this volume; Roxburgh, 1996; Shye et al., 1995; Umberson et al., 1996). However, there is evidence that the pathways may differ for men and women (Shye et al., 1995).

Two personal coping resources, perceived control and self-esteem, have been most frequently examined in studies attempting to link social and economic conditions to health outcomes. Perceived control, or the "perception of self as causally important and effective in the world" (Turner and Roszell, 1994, p. 187), is associated with decreased depression (Mirowsky and Ross, 1989), better self-rated health, longevity and lower levels of activity limitation and psychosocial symptoms (Seeman and Lewis, 1995; Seeman and Seeman, 1983). In a similar vein, self-esteem is "the evaluation which the individual makes and customarily maintains with regard to himself or herself: it expresses an attitude of approval or disapproval toward oneself" (Rosenberg, 1965, p. 5). Low self-esteem is linked to higher levels of depression (Rosenberg et al., 1989; Turner and Roszell, 1994) and increased somatic and psychological manifestations of anxiety (Rosenberg, 1985; Luck and Heiss, 1972). There are important gender differences in perceived control and in self-esteem, with women reporting lower levels of both resources (Mirowsky and Ross, 1989; Turner and Roszell, 1994). Although it has been suggested that this differential distribution according to gender may account for women's greater psychological distress, Thoits (1995) notes inconsistent support for this argument and calls for more research to clarify the complex relationship among personality characteristics, coping strategies and the efficacy of coping outcomes.

With respect to material resources, there is an extensive body of literature on the relationship between socioeconomic inequalities and inequalities in health, with lower socioeconomic status (SES) associated with
poorer health and shorter life expectancy (McDonough et al., 1997; for reviews, see Feinstein, 1993; Williams and Collins, 1995). The social class gradient in relation to health is generally less pronounced for women than for men (but see McDonough et al., 1999b), though the gender differences vary by age, health outcome and the measures of inequality used (Arber, 1997; Matthews et al., 1999; Macintyre and Hunt, 1997).

Large scale studies seldom explore the particular facets of family, work and material circumstances that contribute to ill-health, though their influence appears to vary for men and women. In an investigation of limiting long-standing illness among women and men in Britain, Arber (1991) found that own occupational class, employment status and, to a lesser extent, housing tenure were associated with men's health status. It was only in the case of women that family roles were significant. The variables associated with women's health were more complex and, in addition to employment status, occupational class ('conventionally' measured by husband's occupation if married) and housing tenure, marital and parental status were important. There is also some support for the different impact of employment status and family structure on women and men in the recent work by Matthews et al. (1999). And in an analysis of gender differences in structural and behavioural determinants of health using the 1994 Canadian NPHS data, Denton and Walters (1999) found that social structural factors (being in the highest income category, working full-time, caring for a family and having social support) were more important in predicting good health among women than among men.

Thus, paid work, domestic responsibilities and social, personal and material resources are important elements in men's and women's lives and it crucial to understand how they influence health. The relative absence of comparative research reflects the fact that it is not easy to compare men and women; their experiences have been so different in both the home and the labour force and they differ in access to material resources. To trace the influence of these on health is, therefore, especially complicated. Nevertheless, it is important to aim to systematically investigate the health of women and men using similar indicators rather than, as often in the past, using different indicators for each sex. Only in this way is it possible to reach a fuller understanding of what shapes men's and women's health.

In the search for social mechanisms that might account for gender differences in health, research has typically examined two hypotheses. The differential exposure hypothesis suggests that women report more ill health than men because of higher levels of demands and obligations in their
social roles and lower levels of resources to help them cope with these conditions. By implication, equivalent social role conditions and equal resources ought to eliminate gender differences in health. The differential vulnerability hypothesis makes reference to women's greater reactivity or responsiveness to life events and ongoing strains that are experienced in equal measure by men and women. It is argued that gendered reactivity is located in a generalized female disadvantage in social roles and coping resources that affects the nature and meaning of stressors and, ultimately, the impact of the latter on health. In other words, social roles and resources are related to health in different ways for men and women.

We explore these issues through an analysis of the 1994 Canadian NPHS. It contains numerous measures of physical and mental health, as well as information about the social and economic circumstances of survey participants, including measures of the nature of the paid work setting, social support and personal characteristics. Yet work within the home is neglected and so, instead of assessing the effect of unpaid work conditions on health, we are limited to considering proxy measures in the form of household structure.

## 3. The sample and methodology

### 3.1. Data

The NPHS is a longitudinal study of a nationally representative sample of household residents in Canada initiated in 1994. In each of just over 20,000 households, limited information was collected from all household members and one individual, aged 12 years and older, was selected for a more in-depth interview. The initial household response rate was 88.7 percent, while the selected person response rate was 96.1 percent. More information on the sample design is available in Tamblay and Catlin (1995). Because our explanatory models are more appropriate for nonretired adults, the present analysis uses data for individuals whose ages range from 25 to 64 years of age (inclusive). The sample size is 11,241 , though listwise deletion for missing variables reduced the size of the overall sample.

### 3.2. Measures

The measures of health used in this paper are three which showed fairly consistent differences between women and men: distress, a measure of mental health; migraine which is sometimes considered to be a psychosocial health problem, and arthritis/rheumatism a measure of physical health. Distress is an unpleasant subjective state characterized by feelings of sadness, restlessness, nervousness and hopelessness (Ross and Van Willigen, 1997) measured by the University of Michigan revision of the Composite Diagnostic Interview (World Health Organization, 1990). Distress increases as scores, ranging from 0 to 24, increase (see Appendix for item list). Participants in the NPHS were also asked to indicate whether a health professional had diagnosed, among other health problems, artbritis/rheumatism and migraine. Each of these was treated dichotomously, with those reporting the condition assigned a value of 1 and otherwise, 0 .

Paid Work Conditions. We use two work status variables and five indicators of work stress as measures of paid work conditions. Working is coded 1 for currently working for pay and 0 , for all others. Full-time work is a dichotomous variable that codes full-time workers (working 30 hours or more per week) as 1 and part-time workers as 0 . Work stress variables include: control over job tasks, the psychological demands of work, job insecurity, physical demands of work and social support at work. These measures are derived as part of a modified version of the Job Content Questionnaire (Karasek, 1985) which was originally developed from the 1969, 1972 and 1977 U.S.-based Quality of Employment Surveys (see Appendix for more information). Each of the five work stress variables was dichotomized at its $75^{\text {th }}$ percentile after re-ordering all scales to reflect increasing stress. For each variable a score of 1 represents high levels of job stress, while 0 represents all other levels of job stress.

Household/Family Structure. Three measures of household/family structure are used as proxies for unpaid work conditions in the home: marital status, the ages of children living in the household and household size. Marital status consists of two dummy variables: single (yes $=1$; no $=0$ ) and formerly married $(\mathrm{yes}=1 ;$ no $=0)$. The age of the youngest child in the household is ascertained by three dummy variables: at least one child under 6 years $(\mathrm{yes}=1 ;$ no $=0)$; children 6-11 years ( $\mathrm{yes}=1$; no $=0$ ); and cbildren 1225 (yes = 1; no = 0). Household size assesses the number of people living in the household (range: 1-5 or more).

Social and Personal Resources. Three indicators of social and personal resources are examined: social support, perceived control, and self-esteem (see Appendix for details of these measures). Social support is derived from four items that reflect perceived emotional support. Perceived control is an index derived from the work of Pearlin and Schooler (1978, p. 5). It measures the extent to which individuals believe that their life chances are under their control. Self-esteem is an index based on analyses conducted by Pearlin and Schooler (1978) using a sub-set of items from Rosenberg's (1965) self-esteem scale. It refers to "the positiveness of one's attitude toward oneself" (Pearlin and Schooler, 1978, p. 5).

Material Resources. Three measures of material resources are examined: total bousehold income (the midpoint of 11 categories ranging from no income to $\$ 80,000$ or more); education (in years); and bome ownership (coded 1 if dwelling owned by a member of the household and 0 , otherwise).

Sex and Age. Female is a dummy variable representing sex, coded 1 for females and 0 for males. For the multivariate analysis, age is assigned the mid-point of 5 -year age categories ranging from 25 to 64 years.

### 3.3. Analysis

Our multivariate analysis explores pathways that may account for observed gender differences in health. Logistic and ordinary least squares regression techniques are used according to the measurement of the health outcome of interest. Sampling weights are used in all estimations to adjust for non-response and differential selection probabilities. In addition, the effect of a complex sampling design on variance estimates is taken into consideration in the multivariate analysis by inflating standard error estimates by the square root of the average design effect (1.64) of the survey.

## 4. Results

In the following sections we report on the two types of analysis we conducted in an effort to understand gender differences in the experience of distress, migraines and arthritis/rheumatism.

Table 2
Paid work conditions, household structure and resources by gender, ages 25-64. National Population Health Survey, Canada, 1994a

| Variable | Male |  | Female |  | $t$-test of significance of difference |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean/ Proportion | s.d. | Mean/ Proportion | s.d. |  |
| Paid work conditions |  |  |  |  |  |
| Employed full time | 75.2\% |  | 46.7\% |  | ** |
| Employed part time | 4.3\% |  | 15.9\% |  | ** |
| Not employed | 20.5\% |  | 37.4\% |  | ** |
| Job conditions: ${ }^{\text {b }}$ |  |  |  |  |  |
| Low control | 20.4\% |  | 29.0\% |  | ** |
| High psychological demands | 17.2\% |  | 21.2\% |  | ** |
| High job insecurity | 21.3\% |  | 21.5\% |  |  |
| High physical exertion | 20.0\% |  | 15.1\% |  | ** |
| Low social support at work | 20.7\% |  | 21.9\% |  |  |
| Household structure |  |  |  |  |  |
| Marital status |  |  |  |  |  |
| Single | 16.5\% |  | 12.1\% |  | ** |
| Formerly married | 8.2\% |  | 14.3\% |  | ** |
| Married | 75.2\% |  | 73.5\% |  |  |
| Household size | 3.01 | 1.27 | 3.05 | 1.16 |  |
| Age of youngest child in household |  |  |  |  |  |
| $<6$ years | 21.3\% |  | 23.4\% |  | ** |
| 6-11 years | 12.2\% |  | 14.7\% |  | ** |
| $12-25$ years | 19.7\% |  | 20.1\% |  |  |
| No children | 46.8\% |  | 41.8\% |  | ** |
| Resources |  |  |  |  |  |
| Social support | 3.67 | 0.78 | 3.78 | 0.61 | ** |
| Perceived control | 20.00 | 4.31 | 19.42 | 4.30 | ** |
| Self-esteem | 20.46 | 2.91 | 20.19 | 2.97 | ** |
| Household income | \$47,417 | \$24,330 | \$44,914 | \$22,973 | ** |
| Years of education | 12.98 | 2.44 | 12.82 | 2.12 | ** |
| Homeowner | 73.2\% |  | 71.3\% |  | ** |
| N | 4,460 |  | 5,413 |  |  |

$a^{* *} p<.01$ significant differences in group means/proportions.
$b \mathrm{~N}$ for job conditions: Women $=3,404$; Men $=3,568$.

### 4.1. Differential exposure

The first hypothesis tested is that gender differences in health are the result of gendered exposure to paid work conditions, household structure and social, material and psychological resources. We present gender differences in the latter and then consider their effects on the relationship between gender and health in multivariate models. Table 2 shows differences in employment and household conditions and resources by gender. Gender differences were typically small. Women were more likely to be nonemployed and, when employed, less likely to be in full-time jobs. They were more likely to work in jobs characterized by high work stress, with low levels of control and high levels of psychological demands, but less likely to have jobs with high physical exertion. Women were less likely to be single but they were almost twice as likely to be widowed, separated or divorced.

Table 3 presents the effects of gender and social circumstances on the health outcomes of interest. The first column for each measure presents the effect of gender, adjusted only for age. The second column adds paid work and household conditions and social, personal and material resources to the model. If the gender coefficients presented in the first column for each health outcome were reduced to nonsignificance in the second column, it would support the contention that gender differences in health reflect differences in the social and economic conditions of women's and men's lives. By implication, if gender disparities in these circumstances were eliminated, health differences between women and men would disappear.

The partially-adjusted effect of gender confirms the female excess in distress, migraines and arthritis/rheumatism noted in Table 1. The addition of the paid work and household conditions and resources had variable consequences on these relationships. The impact of gender on distress declined by 32 percent ([.69-.47]/69), but remained statistically significant. For the other outcomes, exposure to various social and economic conditions accounted for a relatively small percentage of the ageadjusted gender effect.

Although they played a relatively modest role in explaining gender differences in health, paid work, household conditions and resources exerted independent effects on health. Being employed significantly lowered distress scores, but was unrelated to the other outcomes. The nature of work, as indicated by five job stress items, was variable. Working condi-

Table 3
Distress, migraine and arthritis/rheumatism regressed on paid work conditions, household structure, ages 25-64.

National Population Health Survey, Canada, $1994 a, b$

| Variable | Distress |  | Migraine |  | Arthritis/rheumatism |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \mathrm{b} \\ \text { (s.e.) } \end{gathered}$ | $\begin{gathered} \mathrm{b} \\ \text { (s.e.) } \end{gathered}$ | Odds ratio $(95 \% \mathrm{CI})$ | $\begin{aligned} & \text { Odds ratio } \\ & \text { ( } 95 \% \text { CI) } \end{aligned}$ | Odds ratio $(95 \% \text { CI) }$ | $\begin{aligned} & \text { Odds ratio } \\ & \text { ( } 95 \% \text { CI) } \end{aligned}$ |
| Female | $\begin{gathered} 0.69^{*} \\ (0.09) \end{gathered}$ | $\begin{gathered} 0.47 * \\ (0.08) \end{gathered}$ | $\begin{gathered} 3.05^{*} \\ (2.48,3.39) \end{gathered}$ | $\begin{gathered} 2.86^{*} \\ (2.30,3.55) \end{gathered}$ | $\begin{gathered} 1.72^{*} \\ (1.47,2.03) \end{gathered}$ | $\begin{gathered} 1.52^{*} \\ (1.27,1.80) \end{gathered}$ |
| Age | $\begin{aligned} & -0.03^{*} \\ & (0.00) \end{aligned}$ | $\begin{array}{\|l\|l} \hline-0.04^{*} \\ (0.00) \end{array}$ | $\begin{gathered} 0.99^{*} \\ (0.98,0.99) \end{gathered}$ | $\begin{gathered} 0.99^{*} \\ (0.97,0.99) \end{gathered}$ | $\begin{gathered} 1.08^{*} \\ (1.07,1.09) \end{gathered}$ | $\begin{gathered} 1.06^{*} \\ (1.05,1.07) \end{gathered}$ |
|  |  |  |  |  |  |  |
| Employed |  | $\begin{aligned} & -0.82^{*} \\ & (0.15) \end{aligned}$ |  | $\begin{gathered} 0.82 \\ (0.58,1.15) \end{gathered}$ |  | $\begin{gathered} 0.77 \\ (0.56,1.05) \end{gathered}$ |
| Employed full time |  | $\begin{gathered} 0.06 \\ (0.13) \end{gathered}$ |  | $\begin{gathered} 0.94 \\ (0.70,1.27) \end{gathered}$ |  | $\begin{gathered} 0.85 \\ (0.64,1.11) \end{gathered}$ |
| Job conditions: <br> Low control |  | $\begin{aligned} & \hline-0.37 * \\ & (0.11) \end{aligned}$ |  | $\begin{gathered} 0.75^{*} \\ (0.57,0.99) \end{gathered}$ |  | $\begin{gathered} 0.85 \\ (0.65,1.09) \end{gathered}$ |
| High psychol. demands |  | $\begin{gathered} 0.66^{*} \\ (0.12) \end{gathered}$ |  | $\begin{gathered} 1.47^{*} \\ (1.12,1.92) \end{gathered}$ |  | $\begin{gathered} 1.18 \\ (0.89,1.57) \end{gathered}$ |
| High job insecurity |  | $\begin{array}{\|c} \hline 0.28^{*} \\ (0.11) \end{array}$ |  | $\begin{gathered} 1.57^{*} \\ (1.21,2.02) \end{gathered}$ |  | $\begin{gathered} 1.17 \\ (0.90,1.53) \end{gathered}$ |
| High physical exertion |  | $\begin{array}{\|c} \hline 0.57 * \\ (0.12) \end{array}$ |  | $\begin{gathered} 1.03 \\ (0.76,1.39) \end{gathered}$ |  | $\begin{gathered} 0.98 \\ (0.73,1.31) \end{gathered}$ |
| Low social support at work <br> Household structure |  | $\begin{gathered} 0.31^{*} \\ (0.11) \end{gathered}$ |  | $\begin{gathered} 1.13 \\ (0.86,1.48) \end{gathered}$ |  | $\begin{gathered} 1.03 \\ (0.78,1.35) \end{gathered}$ |
| Marital status (ref $=$ married) |  |  |  |  |  |  |
| Single |  | $\begin{array}{\|c} 0.01 \\ (0.13) \end{array}$ |  | $\begin{gathered} 0.74 \\ (0.54,1.00) \end{gathered}$ |  | $\begin{gathered} 0.78 \\ (0.58,1.05) \end{gathered}$ |
| Formerly married |  | $\begin{gathered} 0.53^{*} \\ (0.13) \end{gathered}$ |  | $\begin{gathered} 0.10 \\ (0.82,1.42) \end{gathered}$ |  | $\begin{gathered} 1.09 \\ (0.85,1.39) \end{gathered}$ |
| Household size |  | $\begin{gathered} 0.01 \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.98 \\ (0.86,1.12) \end{gathered}$ |  | $\begin{gathered} 0.91 \\ (0.80,1.04) \end{gathered}$ |


| Age of youngest child in household ${ }^{a}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $<6$ years |  | $\begin{aligned} & -0.15 \\ & (0.15) \end{aligned}$ |  | $\begin{gathered} 0.92 \\ (0.64,1.33) \end{gathered}$ |  | $\begin{gathered} 0.69 \\ (0.46,1.03) \end{gathered}$ |
| 6-11 years |  | $\begin{aligned} & -0.31 \\ & (0.16) \end{aligned}$ |  | $\begin{gathered} 0.10 \\ (0.75,1.58) \end{gathered}$ |  | $\begin{gathered} 0.89 \\ (0.60,1.32) \end{gathered}$ |
| 12-25 years |  | $\begin{gathered} 0.09 \\ (0.13) \end{gathered}$ |  | $\begin{gathered} 0.10 \\ (0.77,1.45) \end{gathered}$ |  | $\begin{gathered} 0.96 \\ (0.73,1.26) \end{gathered}$ |
| Resources |  |  |  |  |  |  |
| Social support |  | $\begin{aligned} & -0.56^{*} \\ & (0.05) \end{aligned}$ |  | $\begin{gathered} 0.91 \\ (0.81,1.03) \end{gathered}$ |  | $\begin{gathered} 1.02 \\ (0.91,1.13) \end{gathered}$ |
| Perceived control |  | $\begin{aligned} & -0.26^{*} \\ & (0.01) \end{aligned}$ |  | $\begin{gathered} 0.97 * \\ (0.94, .98) \end{gathered}$ |  | $\begin{gathered} 0.97 * \\ (0.94, .98) \end{gathered}$ |
| Self-esteem |  | $\begin{aligned} & -0.15^{*} \\ & (0.01) \end{aligned}$ |  | $\begin{gathered} 0.96^{*} \\ (0.93,0.99) \end{gathered}$ |  | $\begin{gathered} 0.98 \\ (0.92,1.04) \end{gathered}$ |
| Household income |  | $\begin{aligned} & -0.05^{*} \\ & (0.02) \end{aligned}$ |  | $\begin{gathered} 0.98 \\ (0.93,1.03) \end{gathered}$ |  | $\begin{gathered} 0.98 \\ (0.94,1.02) \end{gathered}$ |
| Years of education |  | $\begin{gathered} 0.04^{*} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 0.10 \\ (0.97,1.06) \end{gathered}$ |  | $\left\lvert\, \begin{gathered} 0.96^{*} \\ (0.92,0.99) \end{gathered}\right.$ |
| Homeowner |  | $\begin{aligned} & -0.43^{*} \\ & (0.09) \end{aligned}$ |  | $\begin{gathered} 0.74^{*} \\ (0.59,0.92) \end{gathered}$ |  | $\begin{gathered} 0.85 \\ (0.69,1.04) \end{gathered}$ |
| Pseudo $\mathrm{R}^{2}$ |  |  | 0.023 | 0.039 | 0.078 | 0.095 |
| R ${ }^{2}$ | 0.019 | 0.270 |  |  |  |  |
| $N$ | 9,866 | 9,866 | 9,868 | 9,868 | 9,868 | 9,868 |

OLS regression used for distress; logistic regression used for migraine and arthritis/ rheumatism.
a Reference category is no children in the household.

* $p<.05$.
tions were most consistently associated with distress, while none were related to arthritis/rheumatism. As expected, job stress was positively associated with morbidity. An exception to this pattern was low control over job tasks which lowered distress scores and the odds of reporting migraines.

Among the household variables, marital status was the only item that was associated with the health outcomes and its effect was variable. Relative to the married, individuals who had never married were less likely to report migraines. The formerly married had higher odds of distress scores
compared with the married. Household size and children living in the home were unrelated to all health measures. ${ }^{1}$

Social, personal and material resources exhibited similarly mixed patterns. Social support, perceived control and self-esteem were inversely related to morbidity, although they were not always statistically significant. In that regard, perceived control showed the most consistent pattern of effects on the health outcomes. Home ownership was inversely related to migraine and distress, while increasing household incomes lowered the odds of distress scores. Increasing education lowered the odds of reporting arthritis/rheumatism, but raised distress scores.

In summary, the distributions of paid work conditions, household circumstances and resources revealed mostly minor differences by gender. Exceptions were women's increased likelihood of not being in the labour force, of working part-time and being formerly married. Women were also somewhat more disadvantaged than men when it came to job strain. Given the relatively muted gendered exposure to these living circumstances, it was not surprising that they contributed very little to accounting for gender differences in health.

### 4.2. Differential vulnerability

The second hypothesis we test is that gender differences in health arise from differential "vulnerability" to paid work and household conditions. The idea is that women suffer more in health terms from these social circumstances, even when the latter are similar to those of men. Positive, statistically significant interactions involving gender and each of the indicators of the paid work and household environments would lend support to this contention. However, women are not always disadvantaged. In some instances, men may be more reactive to the effects of paid work and household conditions. Negative interactions would be indicative of the health-protective effect of paid work and household conditions for women, compared with men.

Among the interaction models tested for the health outcomes of interest, those for arthritis/rheumatism and distress revealed statistically

[^7]significant interactions between gender and social conditions (Table 4). Being formerly married raised women's risk of arthritis/rheumatism and increased their distress scores more than it did for men (relative to married men). The lower panel of Table 4 illustrates the joint effects of gender and marital status. ${ }^{2}$ Among women, being formerly married makes a difference by raising the predicted probability of reporting arthritis or rheumatism (from .47 among the married to .56 for the formerly married). Formerly married men are less likely than the married to report this health condition, although the difference is not statistically significant. Being separated, divorced or widowed raised the distress scores of both women and men, but did so for women by 85 percent [(2.83$1.53) / 1.53=.85]$ and for men by 58 percent [ $(1.84-1.16) / 1.16=.58]$.

In light of these gendered effects of marital status on health, we next investigate whether social, personal and material resources ${ }^{3}$ serve as mitigating factors. For example, women may be more vulnerable to the health-damaging effects of separation, divorce or widowhood because resources that can be used for coping operate less effectively for them than for men. Empirical support for this pathway, however, was only evident for distress.

Table 5 shows the addition of resources to models of paid work conditions and household structure predicting distress. Stratifying the analysis by gender reveals the ways in which the various independent variables may be associated in different (or similar) ways with health for men and women. For example, the statistically significant effect of being formerly married (Model 1) among men is rendered nonsignificant (Model 2), partly through the addition of material resources, but more so by social support. The psychological variables of perceived control and self esteem did nothing to change the magnitude of the formerly married coefficient. (Additional analyses wherein resources were added in successive blocks are not shown here.)

[^8]Table 4
Coefficients for distress and arthritis/rheumatism regressed on paid work conditions, household structure and gender interactions, ages 25-64.

National Population Health Survey, Canada, $1994 a, b$

| Variable | Distress | Arthritis/ rheumatism |
| :---: | :---: | :---: |
|  | $\begin{gathered} \mathrm{b} \\ \text { (s.e.) } \end{gathered}$ | Odds ratio ( $95 \%$ CI) |
| Female | $\begin{aligned} & 0.37 * * \\ & (0.10) \end{aligned}$ | $\begin{gathered} 1.33^{*} \\ (1.10,1.61) \end{gathered}$ |
| Age | $\begin{aligned} & -0.04 * * \\ & (0.004) \end{aligned}$ | $\begin{gathered} 1.06^{* *} \\ (1.05,1.07) \end{gathered}$ |
| Age * Female |  |  |
| Paid work conditions (ref= not employed) |  |  |
| Employed | $\begin{aligned} & -1.58 * * \\ & (0.17) \end{aligned}$ | $\begin{gathered} 0.65^{*} \\ (0.48,0.89) \end{gathered}$ |
| Employed full time | $\begin{aligned} & -0.06 \\ & (0.15) \end{aligned}$ | $\begin{gathered} 0.79 \\ (0.60,1.06) \end{gathered}$ |
| Job conditions Low control | $\begin{gathered} 0.15 \\ (0.12) \end{gathered}$ | $\begin{gathered} 0.98 \\ (0.76,1.26) \end{gathered}$ |
| High psychological demands | $\begin{aligned} & 0.41^{* *} \\ & (0.13) \end{aligned}$ | $\begin{gathered} 1.11 \\ (0.84,1.47) \end{gathered}$ |
| High job insecurity | $\begin{aligned} & 0.75^{* *} \\ & (0.13) \end{aligned}$ | $\begin{gathered} 1.21 \\ (0.93,1.58) \end{gathered}$ |
| High physical exertion | $\begin{aligned} & 0.47 * * \\ & (0.13) \end{aligned}$ | $\begin{gathered} 1.01 \\ (0.75,1.34) \end{gathered}$ |
| Low social support at work | $\begin{aligned} & 0.71^{* *} \\ & (0.13) \end{aligned}$ | $\begin{gathered} 1.08 \\ (0.82,1.41) \end{gathered}$ |
| Household structure |  |  |
| Marital status (ref=married) Single | $\begin{aligned} & 0.42 * * \\ & (0.14) \end{aligned}$ | $\begin{gathered} 0.84 \\ (0.63,1.11) \end{gathered}$ |
| Formerly married | $\begin{aligned} & 0.68^{* *} \\ & (0.23) \end{aligned}$ | $\begin{gathered} 0.79 \\ (0.53,1.17) \end{gathered}$ |
| Household size | $\begin{aligned} & -0.05 \\ & (0.06) \end{aligned}$ | $\begin{gathered} 0.91 \\ (0.80,1.03) \end{gathered}$ |
| Age of youngest child in household ${ }^{c}$ $<6$ years | $\begin{aligned} & -0.05 \\ & (0.17) \end{aligned}$ | $\begin{gathered} 0.65^{*} \\ (0.43,0.97) \end{gathered}$ |


| 6-11 years | $\begin{aligned} & -0.14 \\ & (0.18) \end{aligned}$ | $\begin{gathered} 0.86 \\ (0.58,1.26) \end{gathered}$ |
| :---: | :---: | :---: |
| 12-25 years | $\begin{gathered} 0.23 \\ (0.15) \end{gathered}$ | $\begin{gathered} 0.95 \\ (0.72,1.25) \end{gathered}$ |
| Interactions ${ }^{\text {d }}$ |  |  |
| Gender * Formerly married | $\begin{gathered} 0.62^{*} \\ (0.28) \end{gathered}$ | $\begin{gathered} 1.84^{*} \\ (1.20,2.83) \end{gathered}$ |
| -2Log likelihood |  | 6780.61 |
| Model Chi-square (d.f.) |  | 934.40** (16) |
| $\mathrm{R}^{2}$ | 0.07 |  |
| $N$ | 9,873 | 9,874 |
|  | Predicted score | Predicted probability ${ }^{e}$ |
| Women |  |  |
| Formerly married | 2.83 | 0.56 |
| Married | 1.53 | 0.47 |
| Men |  |  |
| Formerly married | 1.84 | 0.34 |
| Married | 1.16 | 0.40 |

a OLS regression used for distress; logistic regression used for arthritis/rheumatism. $b^{*} p<.05 ;{ }^{* *} p<.01$.
$c$ Reference category is no children in the household.
$d$ Only statistically significant interactions are presented here. Interactions involving gender and resources were tested but none were statistically significant.
$e$ Predicted values were calculated at sample mean or proportion values of covariates not involved in the interactions.

Although resources did not completely account for the effect of widowhood, divorce or separation on women's distress, the pathways linking this marital status to distress were similar to those observed for men. Social support and material resources each account for roughly one-third of the effect of being formerly married, while personal resources have very little effect (McDonough et al., 1999a). Hence, formerly married women, like formerly married men, report higher levels of distress than their married counterparts mainly because they have fewer financial resources and less social support.

Apart from their role in mediating the impact of a formerly married state on distress, the patterns of effects exerted by different types of re sources on distress are worth considering. For example, the magnitudes

Table 5
Coefficients for distress among men and women regressed on paid work conditions, household structure and resources, ages 25-64. National Population Health Survey, Canada, $1994 a, b$

| Variable | Male |  | Female |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Model } 1 \\ \mathrm{~b} \\ \text { (s.e) } \end{gathered}$ | Model 2 b (s.e.) | Model 3 b (s.e.) | Model 4 b (s.e.) |
| Age | $\begin{aligned} & -0.04 * * \\ & (0.01) \end{aligned}$ | $\begin{aligned} & -0.04^{* *} \\ & (0.01) \end{aligned}$ | $\begin{aligned} & -0.05^{* *} \\ & (0.01) \end{aligned}$ | $\begin{aligned} & -0.05^{* *} \\ & (0.01) \end{aligned}$ |
| Paid work conditions (ref $=$ not employed) Employed | $\begin{aligned} & -1.98^{* *} \\ & (0.31) \end{aligned}$ | $\begin{aligned} & -1.27^{* *} \\ & (0.29) \end{aligned}$ | $\begin{aligned} & -1.48^{* *} \\ & (0.21) \end{aligned}$ | $\begin{aligned} & -0.59 * * \\ & (0.19) \end{aligned}$ |
| Employed full time | $\begin{gathered} 0.39 \\ (0.29) \end{gathered}$ | $\begin{gathered} 0.48 \\ (0.26) \end{gathered}$ | $\begin{aligned} & -0.27 \\ & (0.18) \end{aligned}$ | $\begin{aligned} & -0.15 \\ & (0.16) \end{aligned}$ |
| Job conditions Low control | $\begin{gathered} 0.14 \\ (0.16) \end{gathered}$ | $\begin{aligned} & -0.28 \\ & (0.15) \end{aligned}$ | $\begin{gathered} 0.17 \\ (0.18) \end{gathered}$ | $\begin{aligned} & -0.50^{* *} \\ & (0.15) \end{aligned}$ |
| High psychological demands | $\begin{aligned} & 0.46^{* *} \\ & (0.17) \end{aligned}$ | $\begin{aligned} & 0.79 * * \\ & (0.16) \end{aligned}$ | $\begin{gathered} 0.33 \\ (0.20) \end{gathered}$ | $\begin{aligned} & 0.49 * * \\ & (0.17) \end{aligned}$ |
| High job insecurity | $\begin{aligned} & 0.84^{* *} \\ & (0.16) \end{aligned}$ | $\begin{gathered} 0.35^{*} \\ (0.15) \end{gathered}$ | $\begin{aligned} & 0.64 * * \\ & (0.20) \end{aligned}$ | $\begin{gathered} 0.31 \\ (0.17) \end{gathered}$ |
| High physical exertion | $\begin{gathered} 0.33^{*} \\ (0.16) \end{gathered}$ | $\begin{gathered} 0.42^{*} \\ (0.15) \end{gathered}$ | $\begin{aligned} & 0.65 * * \\ & (0.22) \end{aligned}$ | $\begin{aligned} & 0.66^{* *} \\ & (0.19) \end{aligned}$ |
| Low social support at work | $\begin{aligned} & 0.77 * * \\ & (0.16) \end{aligned}$ | $\begin{gathered} 0.36^{*} \\ (0.15) \end{gathered}$ | $\begin{aligned} & 0.64^{* *} \\ & (0.19) \end{aligned}$ | $\begin{gathered} 0.30 \\ (0.17) \end{gathered}$ |
| Household structure |  |  |  |  |
| Marital status (ref=married) Single | $\begin{gathered} 0.36^{*} \\ (0.19) \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.17) \end{gathered}$ | $\begin{gathered} 0.59 * * \\ (0.21) \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.19) \end{gathered}$ |
| Formerly married | $\begin{aligned} & 0.72^{* *} \\ & (0.23) \end{aligned}$ | $\begin{gathered} 0.34 \\ (0.21) \end{gathered}$ | $\begin{aligned} & 1.33 * * \\ & (0.19) \end{aligned}$ | $\begin{aligned} & 0.59 * * \\ & (0.18) \end{aligned}$ |
| Household size | $\begin{aligned} & -0.06 \\ & (0.08) \end{aligned}$ | $\begin{gathered} 0.00 \\ (0.07) \end{gathered}$ | $\begin{gathered} -0.04 \\ (0.08) \end{gathered}$ | $\begin{aligned} & -0.02 \\ & (0.07) \end{aligned}$ |
| Age of youngest child in household $<6$ years | $\begin{gathered} 0.21 \\ (0.23) \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.22) \end{gathered}$ | $\begin{aligned} & -0.36 \\ & (0.24) \end{aligned}$ | $\begin{aligned} & -0.33 \\ & (0.21) \end{aligned}$ |
| 6-11 years | $\begin{gathered} 0.05 \\ (0.25) \end{gathered}$ | $\begin{aligned} & -0.15 \\ & (0.23) \end{aligned}$ | $\begin{aligned} & -0.35 \\ & (0.25) \end{aligned}$ | $\begin{aligned} & -0.45^{*} \\ & (0.22) \end{aligned}$ |
| 12-25 years | $\begin{gathered} 0.19 \\ (0.21) \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.19) \end{gathered}$ | $\begin{gathered} 0.25 \\ (0.21) \end{gathered}$ | $\begin{gathered} 0.15 \\ (0.18) \end{gathered}$ |


| Resources Social support |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & -0.41^{* *} \\ & (0.07) \end{aligned}$ |  | $\begin{aligned} & -0.78^{* *} \\ & (0.09) \end{aligned}$ |
| Perceived control |  | $\begin{aligned} & -0.22^{* *} \\ & (0.01) \end{aligned}$ |  | $\begin{aligned} & -0.29 * * \\ & (0.01) \end{aligned}$ |
| Self-esteem |  | $\begin{aligned} & -0.12^{* *} \\ & (0.02) \end{aligned}$ |  | $\begin{aligned} & -0.16^{* *} \\ & (0.02) \end{aligned}$ |
| Household income |  | $\begin{aligned} & -0.01 \\ & (0.03) \end{aligned}$ |  | $\begin{gathered} -0.06^{*} \\ (0.03) \end{gathered}$ |
| Homeowner |  | $\begin{aligned} & -0.44^{* *} \\ & (0.13) \end{aligned}$ |  | $\begin{aligned} & -0.45^{* *} \\ & (0.14) \end{aligned}$ |
| $\mathrm{R}^{2}$ | 0.07 | 0.22 | 0.06 | 0.30 |
| $N$ | 4,461 |  | 5,412 |  |

$a$ OLS regression used for distress.
$b^{*} p<0.05 ; * * p<0.01$.
$c$ Reference category is no children in the household.
of the coefficients for social support and perceived control are larger for women than for men (comparing Models 2 and 4) (McDonough et al., 1999a). They indicate that these resources may be more beneficial in reducing women's distress than they are for men. Household income, home ownership and self-esteem were inversely related to distress, but there were no statistically significant gender differences in the strength of these relationships. ${ }^{4}$

In summary, greater vulnerability is not a generalized health response of women to paid work conditions and family structure. A differential effect of these conditions by gender was limited to family structure and was evident only for arthritis/rheumatism and distress: being formerly married increased women's reports of arthritis/rheumatism and distress more than it did among men. Overall, we found little support for the notion that the health costs of comparable paid work experiences and household conditions are greater for women than men.

We also found only limited evidence that social, personal and material resources were involved in pathways linking work circumstances to

[^9]health in ways that differed between women and men. Formerly married men reported higher levels of distress than their married counterparts because they had less social support and fewer financial resources. Although this pathway was also observed among women, it only partly accounted for the effect of being formerly married on distress. More generally, social support and self-esteem were more effective in reducing distress among women than they were for men, but other resources were equally effective for both sexes.

## 5. Discussion

When we embarked on this research we expected to find some gender differences in health, though less marked and more variable than is often assumed. This was borne out. We also expected to find that gender differences in features of paid work and household structure, as well as social, material and personal resources would help to explain the gender differences in health that we did observe. Yet, they were not central in accounting for disparities in health. ${ }^{5}$ Moreover, in similar social circumstances, women were not more health "reactive" than were men. These findings are consistent with those of recent work that set out to understand the nature of gender differences in health, but found explanatory models of gender differences in work and family structure to be unsatisfactory (Emslie et al., 1999; Griffin et al., this volume; Lahelma et al., 1999).

These social conditions are widely believed to be highly gendered and their failure to illuminate the basis of selected gender differences in health is puzzling. It is possible that the crude measurement of some of the social indicators and the omission of others are responsible. For example, with respect to paid work, gendered features of the workplace such as the experience of sexual harassment and discrimination were not included as measures. Perhaps the most striking omission is the lack of information on domestic responsibilities and the demands that the household division of labour place on men and especially, on women. In this regard the NPHS data set is no different from many other large-scale surveys which

[^10]appear to be gender blind; women's domestic work, in particular, remains invisible. In the absence of a more detailed knowledge of conditions in the home, we were limited to household structure variables that may be simply inadequate as proxy representations of domestic responsibilities. Our model would have been better assessed if we had access to information on work in the home similar to that which was available for the job stress associated with the social organization of paid work (Walters et al., 1997).

Refining the measurement of paid and unpaid work conditions in surveys, however, may not bring us any closer to understanding the nature of gender differences (and similarities) in health. In fact, the embeddedness of gender in all social relationships may make it impossible to separate gender from the very life circumstances that we examine in order to understand gender patterns in health (Emslie et al., 1999). That is, can we ever assume that we have equalized social role experiences and access to resources across genders simply by "holding constant" ever-more sophisticated operational definitions in analytic models? Or, are social relationships so indelibly shaped by gender, that paid and unpaid work conditions cannot be measured in a comparable manner for women and men?

Qualitative research is important in this regard and in-depth interviews can illuminate issues which a fixed-choice questionnaire cannot. Smaller scale studies allow us to understand the meanings men and women attach to their health and the ways they interpret it in the context of their day-to-day lives. Qualitative analyses also provide an understanding of the social and material conditions of men's and women's lives that cannot be captured in the parsimonious measures of large surveys; they establish a context for understanding the results of statistical analysis. They may also help to convey the ways in which gender intimately affects males and females throughout the life course and the ways in which this cannot be divorced from an understanding of power relations. They can also alert us to similarities across women's and men's lives.

Finally, it is possible that variable gender differences in health and the inadequacy of our model to account for those that were observed, are the result of social and political change in the gendered division of labour in the public and private spheres. The past three decades have witnessed an explosion of women into the labour force, while the prospect of lifetime employment in full-time jobs has been fading for many men as a result of downsizing and globalization. As Annandale and Hunt (2000) argue, there are ways in which experiences may be converging for some men and
some women, while differences among women and among men are becoming more pronounced. It is important to document such changes. Longitudinal studies would be helpful in this regard because they can help us understand the health effects of broadly-based social conditions that characterize various historical periods, as well as the health consequences of particular changes in individuals' living circumstances.

In brief, our findings provide little support for the contention that observed gender differences in health emerge from gender disparities in exposure and vulnerability to paid work conditions, household structures and social, personal and material resources. What do these observations mean for future research and policy formulation? We have already argued for more conceptually informed surveys and for the recognition of the relevance of qualitative research which can explore similarities and differences in men's and women's lives and in their health. In the past decade or so in Canada, there has been an increasing interest in inequalities in health and in the social bases of health and illness (Denton and Walters, 1999), yet there has been very little attention to the role of gender in shaping health and illness.

This neglect of gender may be defined in two ways. First, women have in many respects been invisible in research on health and second, differences in the health of women and men have received scant attention. We would argue that the latter is important, but it would be problematic if we lost sight of women's health per se. It is only because feminist research has drawn attention to power relations and features of women's lives such as unpaid work in the home - that we are aware of the bias that characterizes many studies and the ways in which key aspects of women's experiences remain statistically invisible. Yet, as the NPHS data show, surveys continue to be blind to the realities of women's day-to-day lives and so it is important that this remain a focus of research and source of pressure on major data collection institutions, such as Statistics Canada. But at the same time, we need to document in much more detail the differences and similarities in men's and women's lives. Such research would acknowledge the common influences on women's and men's health and open up the possibility of collective action or policies that focus on shared experiences.

A final related note of caution is appropriate given that gender differences in health appear to be less pronounced than is often assumed. In exploring inequalities in men's and women's lives and tracing their influence on health, it is easy to fall into the trap of medicalizing disadvantage.

In other words, those inequalities that help to create ill-health are seen as unacceptable while those which have no bearing or an uncertain influence on health are considered to be tolerable. Forms of disadvantage can fade into the background when they do not form part of a health equation. It is important to keep in mind that while our focus has been on understanding what influences health, this is not the sole measure of what should be unacceptable inequalities. The absence of marked gender differences in ill-health does not mean that women are not disadvantaged in myriad other ways in relation to men.

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## Appendix

## Health measures

General measures of health
Self-rated health measures respondents' evaluations of their health as poor, fair, good, very good or excellent (scored 1 through 5 , respectively). Restricted activity is assessed through questions that ask respondents to indicate whether they have a long-term disability or handicap, or a physical or mental condition or health problem lasting six months or more which limits them at home, school, at work or in other activities $(\mathrm{yes}=1 ; \mathrm{no}=0)$. Two weeek disability ascertains whether respondents have, at any time during the two weeks preceding the survey, stayed in bed due to illness or injury (yes $=1$; no $=0$ ). Cbronic conditions is a dichotomous variable indicating whether or not a health professional had previously diagnosed: asthma, arthritis, rheumatism, back problems, high blood pressure, migraines, chronic bronchitis, emphysema, diabetes, epilepsy, heart disease, cancer, stomach or intestinal ulcers, stroke, urinary incontinence, Alzheimer's, cataracts or glaucoma. Those reporting at least one of these conditions were coded 1 and all others, 0 for this variable.

## Mental health

The measure of distress was comprised of responses to a question concerning mental and emotional well-being: During the past month, about how often did you feel so sad that nothing could cheer you up; nervous; restless or fidgety; hopeless; worthless; that everything was an effort? Five responses were possible for each of these six items: all of the time, most of the time, some of the time, a little of the time, and none of the time. Depression is a subjective state in which feelings of sadness and worthlessness lasting at least two weeks occupy an individual's thoughts and interferes with mental concentration, sleeping and enjoyment of life. The NPHS uses a subset of items from the CIDI which assesses Major Depressive Episode according to the diagnostic criteria of DSM-III-R. Depression is measured on a scale ranging from 0 to 8 , with higher values representing higher levels of depression. Depression is treated as a dichotomous variable with scores of 3 or higher coded as 1 and all others, as 0 .

## Physical health conditions

Respondents were asked to indicate whether a health professional had diagnosed the following health conditions: arthritis/rbeumatism, migraine, back problems, asthma, chronic bronchitis/emphysema, cancer, heart problems, nonfood allergies and bigh blood pressure. Each of these measures was treated dichotomously, with those reporting the condition assigned a value of 1 and otherwise, 0 . Injuries is a dichotomous measure indicating whether respondents experienced any injuries in the past 12 months that were serious enough to limit normal activity (yes $=1$; no $=0$ ). Pain is treated as a dichotomous measure that assigns a value of 1 to individuals who usually experience feelings of pain or discomfort that are either mild, moderate or severe in intensity, and a value of 0 to those who report no pain or discomfort.

## Work stress

Work stress comprises five dimensions derived from 12 statements to which respondents were asked to indicate whether they strongly agreed, agreed, neither agreed nor disagreed, disagree, or strongly disagreed (coded 0-4). The dimensions and items are as follows:
A. Control (range 0-20)

Control was a sum of scores for skill discretion and decision authority obtained from:

## Skill Discretion

1. Your job requires that you learn new things.
2. Your job requires a bigh level of effort.
3. Your job requires that you do things over and over.

Decision Authority

1. Your job allows you freedom to decide how you do your job.
2. You bave a lot to say about what happens in your job.
B. Psychological Demands (range 0-8)
3. Your job is very hectic.
4. You are free from conflicting demands that others make.
C. Job Insecurity (range 0-4)
5. Your job security is good.
D. Physical Exertion (range 0-4)
6. Your job requires a lot of physical effort.
E. Social Support (range 0-12)
7. You are exposed to hostility or conflict from the people you work with.
8. Your supervisor is helpful in getting the job done.
9. The people you work with are belpful in getting the job done.

## Social and personal resources

Social Support (range 0-4)
Social support is the sum of all responses to the following four questions (coded 1 if yes; 0 if no). Higher scores represent higher levels of social support.

1. Do you bave someone you can confide in/ talk to about your private feelings?
2. Do you have someone you can really count on in a crisis situation?
3. Do you bave someone you can really count on when you make personal decisions?
4. Do you have someone who makes you feel loved and cared for?

Perceived Control (range 3-28)
Perceived control is derived from the 7 statements below coded $0-4$ with reverse scoring on several items to ensure that higher values reflect increasing control: strongly disagree, disagree, neither agree or disagree, agree, strongly agree.

1. You have little control over the things that happen to you.
2. There is really no way you can solve some of the problems you bave.
3. There is little you can do to change many of the important things in your life.
4. You often feel helpless in dealing with problems of life.
5. Sometimes you feel that you are being pushed around in life.
6. What happens to you in the future mostly depends on you.
7. You can do just about anything you really set your mind to.

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# WOMEN'S HEALTH STATUS IN POLAND IN THE TRANSITION TO A MARKET ECONOMY* 

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#### Abstract

Since 1989 Poland bas been experiencing large-scale social and economic changes as a result of the reforms associated with the transition to a market economy. This study uses a 1996 Health Survey of over 20,000 women to examine the impact of the new socio-economic situation and of women's multiple roles on their bealth at the early stage of transition. We investigated the importance of selected economic, socio-demographic and cultural determinants in explaining differences in women's bealth status in Poland, focusing on education level, (un)employment, living conditions, marital status, smoking and life style.

There are bealth inequalities between men and women in Poland based on life expectancy, chronic diseases and bealth self-assessment. Some of these, especially the large differences between life expectancy at the working ages, may be attributed to the difficult socio-economic situation.

The multivariate analysis of women's self-assessed health and morbidity from selected cbronic diseases indicated substantial inequalities in bealth. Together with the behavioural and cultural riske factors recognized by medicine, such as obesity,


[^11]lack of physical exercise and smoking, the paper shows the crucial role of economic factors in influencing Polish women's bealth. Women, whose financial position is poor, are more likely to assess their health as less than good, to suffer from respiratory and circulatory systems' diseases and report neurotic problems. Other factors, strongly connected with the transformation process in Poland, which contribute to bealth problems are lack of employment and low educational level, particularly for younger women. Women's marital and parental status are also important predictors of some categories of health problems, however, their influence varies for women of different ages. Our survey also supports the thesis that loneliness in old age, defined on the basis of living in a one-person bousehold, may be negatively correlated with bealth status.

Keywords: W omen's health, Determinants of health, Poland.

## Résumé

Depuis 1989, la Pologne vit une transformation sociale et économique de grande envergure qui résulte des réformes liées à la transition vers l'économie de marché. Cette communication exploite les données d'une enquête sur la santé menée en 1996 auprès de plus de 20000 femmes, pour étudier limpact de la nouvelle situation socio-économique et des multiples rôles assumés par les femmes sur leur santé dans la première phase de la transition. L'auteur examine la place de certains déterminants économiques, socio-démographiques et culturels dans l'explication des différences de santé chez, les femmes en Pologne; elle concentre son analyse sur le niveau d'instruction, l'emploi et l'inactivité, les conditions de vie, la situation matrimoniale, le tabagisme et le style de vie.

On constate des différences de santé entre hommes et femmes en Pologne, en termes d'espérance de vie, de maladies cbroniques et d'auto-évaluation de l'état de santé. Certaines de ces inégalités, en particulier le grand écart d'espérance de vie aux agges actifs, peuvent être imputées à la situation socio-économique difficile.

L'analyse multivariée de l'auto-évaluation de la santé des femmes et de la morbidité due à certaines maladies chroniques révèle de grandes inégalités. En plus des facteurs de risque comportementaux et culturels reconnus par la médecine, tels que l'obésité, le manque d'exercice physique et le tabagisme, l'étude montre que les facteurs économiques ont une influence décisive sur la santé des Polonaises. Les femmes qui vivent dans une situation financière difficile ont davantage tendance que les autres à estimer qu'elles ne sont pas en bonne santé, à souffrir de maladies du système respiratoire ou du système cardio-vasculaire, et à se plaindre de troubles névrotiques. Les autres facteurs, étroitement associés au processus de transformation
socio-économique, qui contribuent à l'apparition des problèmes de santé sont le manque d'offre d'emploi et la faiblesse du niveau d'instruction, particulièrement cher. les jeunes femmes. La situation matrimoniale et familiale des femmes est aussi un important prédicteur de certains types de problèmes de santé, mais son influence varie selon l'àge. L'enquête corrobore la thèse selon laquelle, cher les personnes âgées, l'isolement (le fait de vivre dans un ménage composé d'une seule personne) peut être négativement associé avec l'état de santé.

Mots-clés : Pologne, Santé des femmes, Déterminants de la santé.

## 1. Introduction

The transformation which initiated the shift of the Polish economy into a market economy in 1989 evoked sweeping economic, social and institutional changes in the political system of Poland. The process of transition from a socialist economy to activities typical of a capitalist one brought about many social consequences, including negative ones. Social welfare services provided by the state have shrunk and employers have abandoned many social functions they used to perform. As a result, the economic position of many households has deteriorated, since this is now primarily dependent on the households' own resources - individual incomes, education and the ability of household members to function under the new socio-economic circumstances. Poland, like the other countries undergoing transformation, has experienced sweeping changes in the distribution of incomes, which have led to the growth of poverty, increasing social inequality and deterioration of living standards (CSO, 1996b; CSO, 1997b; Keane and Prasad, 2000). Privatisation resulted in liquidation of many enterprises, not only unprofitable companies, and job insecurity. These processes have reduced feelings of social security and brought about unemployment (Kolodko and Rutkowski, 1991). Changes in the conditions of participation in the labour market have affected women, in particular. Women, more often than men, have found it difficult to get a job and combine paid employment with child care and domestic responsibilities. Research during the 1990s has shown that unemployed women in Poland have relatively less chance of finding a job and longer periods of unemployment than men. This gender difference is closely con-
nected with marital status. Married men are twice as likely to find a job as married women (UNICEF, 1999).

The increasing requirements of employers, together with the underdeveloped childcare services and inflexible working hours, have added to women's difficulties in combining occupational activity with household duties. Difficulties obtaining adequate housing, together with the shock caused by the transformation changes and changed labour market requirements have resulted in major demographic changes, in particular a rapid decrease in marriages and births (Kotowska, 1998; Holzer and Kowalska, 1997). Over ten years (from 1988 to 1998) the number of marriages dropped from over 300,000 to 200,000 , while the number of births decreased from 600,000 to 400,000 and the total fertility rates has been under 2.1 (below generation replacement level) since the early 1990s (CSO, 1999a).

Political and economic changes since 1989 have also been accompanied by technological and cultural transformations. The increasing democratisation of social life, lifting the bans on access to information, and the development of telecommunications have promoted diffusion of pluralism and liberalism. Over recent years feelings of independence and individualism have grown, while the influence of the Church and traditional family values have decreased.

This paper examines health status within Polish society during the period of political and social disruption, focusing on the health status of women. The first section examines the health status of women and men in Poland based on life expectancy, the occurrence of chronic diseases and self-assessed health status. Secondly, the 1996 Survey on the Health Status of the Population of Poland (CSO, 1997a) is used to analyse self-assessed health and five health conditions among women: hypertensive disease, coronary disease, ulcers of the stomach, duodenum and jejunum, chronic bronchitis and pneumonia, and neurotic disorders, focusing on how these vary according to women's social, economic, cultural and demographic characteristics.

## 2. Demographic and economic situation in Poland

The total population of Poland was $38,700,000$ at the end of 1998, and women constituted $51.4 \%$ of this number, $62 \%$ of the population live in urban and $38 \%$ in rural areas(CSO, 1999a). The demographic
structure of Poland by age is relatively young, compared with the countries of northern or western Europe. The proportion of women according to age group is: pre-working age ( $0-17$ years) - $24 \%$; working age (18-59 years) - $57 \%$; post-working age ( 60 years and over) - $19 \%$.

### 2.1. Economic activity of the population

In November 1998, 44\% of women aged 15 and over had paid jobs. The highest employment rate was among women aged 35-44, $74 \%$ were economically active as were $65 \%$ of women aged $25-34$ and 45-54. The corresponding rates for men are $6 \%-10 \%$ higher, depending on age group (CSO, 1999b). Most employed women combine occupational activity and housework, since Polish families usually follow a traditional pattern of housework assignment. Women prepare meals, do the washing up, clothes-washing, everyday shopping, clean the house, and take care of permanently ill or disabled members of the family. Although women receive assistance from their husbands or other family members, there are large gender differences. In 1994 on average women spent 4.3 hours daily, while men spent 53 minutes doing housework. Assignment of childcare duties is more equal. In families with small children, fathers take care of their children for 3 hours, while mothers do so for 6 hours per day (Firlit-Fesnak, 1997).

Since 1989, there has been a new category of economic activity in Poland, that of unemployed people (defined as not employed, actively seeking a job and available for work). The unemployment rate remains at over 10\% and is higher for women than men. In November 1998 it fell to $12 \%$ among women and $9 \%$ among men, whereas in 1992 the rates were $16 \%$ and $12 \%$, respectively (CSO, 1999b). Young people aged 20-24 find it most difficult to get a job, in this age group $23 \%$ of women, compared to $19 \%$ of men are unemployed. The likelihood of unemployment strongly depends on education level. It is negligible among those with higher education ( $3.5 \%$ for women and $2.5 \%$ for men in the 20-24 age group), but several times higher among people with secondary or lower education levels ( $16 \%$ for women and $10 \%$ for men with basic vocational qualifications). A comparison of employment status by marital status for working age men and women shows that a high proportion of the divorced are unemployed, especially among men (see Table 1). Unlike many western countries, marital status is unrelated to women's employment, since $60 \%$ of women who
are married, never married or divorced are in paid employment, although fewer widowed women are employed, $47 \%$. However, there are major differences among men, with married men most likely to be in paid work and divorced and widowed men being less likely to be employed.

Table 1
Population of working age by economic activity, sex and marital status (column \%)

| Sex and <br> marital status | Economically active |  | Economically <br> inactive | $N$ |
| :--- | :---: | :---: | :---: | ---: |
|  | Working | Unemployed |  |  |
| Women (age 20-60) |  |  |  |  |
| Never married | 59 | 15 | 26 | 2,117 |
| Married | 61 | 10 | 29 | 12,186 |
| Widow | 47 | 5 | 48 | 850 |
| Divorced/Separated | 60 | 13 | 27 | 770 |
| All | 60 | 11 | 29 | 15,923 |
| Men (age 20-65) |  |  |  |  |
| Never married | 63 | 19 | 19 | 3,916 |
| Married | 73 | 7 | 20 | 12,566 |
| Widower | 41 | 8 | 51 | 200 |
| Divorced/Separated | 47 | 20 | 33 | 420 |
| All | 69 | 10 | 21 | 17,102 |

Source: Polish Health Survey 1996.

Obtaining higher educational qualifications gives a better chance not only of finding a job, but of obtaining better-paid jobs, which are the main reason for the significant increase in the number of people studying in Poland. During the school year 1997/98-87\% of persons aged 15-18 were in full-time education, while for the 19-24 age group it was over $34 \%$, compared with $13 \%$ of this age group in education in 1990/91 (CSO, 1999b). Polish women are now better educated than men, for example, among those aged 19-24, the percentage of women studying was $36 \%$, compared with $32 \%$ of men.

### 2.2. Marital status of women and lone motherhood

During the 1990s the percentage of widows and divorced women grew slowly. In 1988, more than $50 \%$ of women were married, while in 1995, the percentage was lower at $44 \%$ ( $40 \%$ in urban areas) (CSO, 1996a). This drop has been due to postponing marriage and the significant decrease in the number of marriages. Every sixth woman aged 5059 and every second aged 60 years and over is a widow (KuciarskaCiesielska and Sobieszak, 1999).

Lone mothers are relatively numerous. The total number of $10,500,000$ families ${ }^{1}$ in Poland includes $1,580,000$ lone mothers with children under 25 (CSO, 1996a). The number of lone fathers with children is very much smaller and amounts to 190,000 . A third of lone mothers are married, but their husbands do not live with the family because of education, their jobs or other problems, e.g. separation. Divorcees with children represent a third of lone mothers, whereas the number of widows represent $21 \%$, and never married women represent $12 \%$ of lone mothers (CSO,1996a).

## 3. Health conditioning - framework of the study

Changes in mortality which occurred in the early years of transformation in Poland and other countries of Central and Eastern Europe (CEE) have shown that major economic and social changes have influenced the health status of the population. There have been dramatic increases in mortality in all CEE countries and in the former Soviet Union, especially among working age men (e.g. Bobak, 1999; Chenet et al., 1996; Kirschner, 1999; Kedelski, 1993; Tabeau, 1996; Zatonski, 1999; Zatonski, 2000).

High levels of premature mortality of men were reported for deaths from external causes, cardiac and circulatory system diseases and liver cirrhosis, particularly during the early period of the "shocks" caused by the economic changes. This has been attributed to the diffi-

[^12]cult socio-economic situation, which disturbed feelings of stability, associated with tremendous stress connected with the loss of jobs, income cuts, increasing inequalities, difficulties with adjustment to the new reality, increased alcohol consumption, and insufficient subsidies for the health service (Bobak, 1999; Cockerham, 2000; Holzer, 1999; Kopp et al., 2000; Tabeau, 1996; Watson, 1995; Zatonski, 2000).

Trends in life expectancy in Poland are shown in Table 2. After the period of a rapid increase in survival rates for both women and men in the 1950s and 1960s, average life expectancy for women stabilised, but started decreasing for working age men by the early 1980s. The economic recession of the 1980 s had an impact on mortality for both sexes. Expectation of life for women as well as men decreased in the years of crisis and social unrest in Poland, especially the early years of the systemic transformation (1989-91). Table 2 shows that the changes affected men during the ages of economic activity, but did not affect the youngest or the oldest age groups. Since 1992 expectation of life for both men and women has increased. The structural transformations also caused an increase in the number of suicides - by over $30 \%$ in the years 1989-94, which is symptomatic of the major difficulties experienced by people at that time (CSO, 1995; CSO, 1999b).

Table 2
Life expectancy $e_{x}$ in Poland for men and women in years 1970-1997

| Years | Men at age |  |  |  |  | Women at age |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 15 | 30 | 45 | 60 | 0 | 15 | 30 | 45 | 60 |
| $1970 / 72$ | 66.8 | 54.6 | 40.7 | 27.3 | 15.5 | 73.8 | 61.1 | 46.5 | 32.3 | 19.3 |
| $1980 / 81$ | 66.9 | 54.0 | 40.1 | 26.9 | 15.7 | 75.4 | 62.2 | 47.6 | 33.4 | 20.3 |
| $1985 / 86$ | 66.9 | 53.6 | 39.5 | 26.3 | 15.3 | 75.3 | 61.8 | 47.2 | 32.9 | 19.9 |
| 1991 | 66.2 | 52.8 | 38.9 | 26.2 | 15.5 | 75.9 | 62.2 | 47.6 | 33.6 | 20.2 |
| 1994 | 67.5 | 53.9 | 39.8 | 26.7 | 15.8 | 76.1 | 62.4 | 47.7 | 33.4 | 20.4 |
| 1997 | 68.5 | 54.5 | 40.4 | 27.1 | 16.1 | 77.0 | 62.9 | 48.2 | 33.9 | 20.8 |

Source: Demographic Yearbook 1998. GUS. tabl. 103 (141).

Cardiac and circulatory system diseases dominate among the causes of death for both women and men in Poland. Mortality from cancer has been steadily growing and is the second largest cause of
death. Analysis of data for 1994 shows that elimination of circulatory system diseases and cancers in Poland would extend life expectancy for persons aged 45 by almost 9 years for both men and women (CSO, 1995; Kedelski, 1993).

An association between material and social resources and several indicators of health status for both men and women is found in western societies (e.g. Khlat et al., 2000; Mackenbach et al., 1997; Stronks et al., 1997; Walters and McDonough, this volume; van Wijk et al., 1995). Comparison between 11 countries of western Europe, based on surveys from 1985-1992 show a generally similar degree of socioeconomic inequalities in health based on such factors as education, occupational activity, and income. The risks of morbidity and mortality were higher in the lower social groups (Mackenbach et al., 1997). Dutch studies showed that the effect of socio-economic factors, such as education, occupational class and income level, on mortality is highly dependent on age, and were more significant for middle-aged persons than those aged over 60 (Kunst et al., 1999).

The links between socio-economic factors and health indicators in Poland and other former communist countries have not yet been well described. Some information became available after 1989 which mainly concerned changes in mortality. Recent research indicates that socioeconomic factors are perhaps the most powerful predictors of health outcomes in CEE. For instance, data from the Czech Republic, Hungary and Estonia and comparable results from several western countries show that the relative differences in mortality by occupation type and education in CEE are larger than in Western Europe (Bobak, 1999).

Comparative studies of self-reported ill health of men and women in Helsinki and Moscow show the possibility of different impacts of social stratification factors on health in different societies of East and West European countries (Palosuo et al., 1998). In contrast to consistent associations with perceived health and morbidity among Helsinki women, education, income, occupation and social differences among Muscovite women were weaker. Similar conclusions can be drawn from analyses in seven post-communist countries: Russia, Estonia, Lithuania, Latvia, Hungary, Poland, Czech Republic (Bobak et al., 2000). Education and material deprivation are important predictors of self-rated health in these countries although education differences in self-rated health are smaller than in western countries. McKeehan
(2000) examined the role of micro and macro determinants for poor physical health in Moscow. This multilevel study indicated that the distribution of social inequality at the community level affected the physical health of individuals. Physical health was associated with educational level and lack of social cohesion, as well as the relative social inequality in urban areas, related to risk of poverty, high alcohol consumption level and small apartment sizes.

The transition period has brought extremely disadvantageous changes in living conditions and lifestyle in CEE. UNICEF studies in the countries of Central and Eastern Europe and the former Soviet Union show that women and children are most affected by these changes (UNICEF, 1999). These factors influence women's health throughout their lives and have cumulative effects. Studies across 19 countries in the transition region have shown that women are at higher risk of depression and emotional difficulties than men. Depressive and post-traumatic stress disorders account for one-third of the total disabilities from mental health problems for women and only 10 percent for men; whereas for men there were higher levels of such factors as alcohol and drug addictions (40\%) (World Bank, 1993).

The first all-Polish health survey of adults inhabiting rural areas, carried out in 1990, showed higher morbidity of women than men from circulatory diseases, endocrinological and neurotic disorders and osteoarthopathy, and women perceived their health as poorer than men (Skretowicz, 1997). Surveys of household finances carried out by the CSO also showed gender differences in health perception by sex in 1994 and 1998. Women more often than men evaluated their health as quite poor or poor, and more often reported chronic diseases (CSO, 1999c; Zajenkowska-Kozłowska, 1996).

Epidemiological research indicates that lifestyle factors might be particularly significant determinants of premature mortality among adults in Poland. Lifestyle characteristics identified as hazard factors include tobacco and alcohol consumption, dietary habits, insufficient time for sleep, obesity and high blood pressure (UNICEF, 1994; Worach-Kardas, 2000; Zatonski, 1999). The economic crisis and financial difficulties of many families caused household changes in food purchasing and consumption behaviours in Poland. Those families who bought cheaper and lower quality food products tended to report worse health of household members (Bakken et al., 1999). Tobacco consumption has stabilised at one of the highest levels in the world and
cigarettes sold in Poland contain relatively high levels of tar and nicotine (Zatonski and Przewozniak, 1996). During the transition period there has been an increase in smoking, especially among adolescent girls and boys across the region (Mazur et al., 2000; BPRdSR, 1998; UNICEF, 1999). Surveys of older people living in Cracow and the factors influencing their life expectancy showed that the factors which made the risk of death decrease for women were: physical fitness, taking care of health in the past, holding life dear, and higher education level, whereas being world-weary, perceiving one's health as poor and smoking increased the risk of death (Tobiasz-Adamczyk and Szfraniec, 2000).

The potential effects of women's multiple roles, combining the roles of wife, mother and employee, on women's health in Poland, has to date not been studied. According to Khlat et al. (2000), Arber and Cooper (2000), and Lahelma et al. (this volume), family type and employment status as well as other socio-economic variables are interrelated and they significantly differentiate women's health status in France, Britain and Finland. Women living in two-parent families and with children enjoyed better health compared to women living in other types of union or alone. This supports results obtained for mortality of Finnish women (Martikainen, 1995).

## 4. Survey design

The paper analyses data from the Survey on the Health Status of the Population of Poland (Health Survey 1996) which was carried out by the Polish Central Statistical Office in April 1996, according to the international recommendations of the World Health Organisation. The survey included nearly 20,000 households and interviewed 47,900 women and men aged 15 and over living in these households. The results are nationally representative and can be generalised to the whole population of women in Poland (CSO, 1997a). Analyses presented in this paper are based on a sample of 25,123 women aged 15 and over.

### 4.1. Variables analysed

The paper analyses selected social, economic, cultural and demographic factors including: household financial position, education of
the woman, her occupational activity, urban-rural residence, marital status, smoking, body mass index, physical activity, whether the woman lives in a one-person household and if any children under 15 live in the household. The percentage distributions of each variable for five age groups of women are shown in the Appendix Table.

The socio-economic factors included in the analysis (household financial position, education level of the woman, her occupational activity, and urban-rural residence) play a key role in the functioning of many families in Poland. Women who enjoy a comfortable financial position and a secure occupation, based on high qualifications, are likely to have a feeling of security and greater satisfaction with life. Living in a big city adds to the chance of economic well-being.

Financial position was defined on the basis of respondents' selfassessment: 1. Good - have enough money to buy everything they need without economising (or they have enough money but they economise); 2. Medium - major expenditures are a problem; 3. Bad their money can buy the cheapest food, but no clothes, or - it can buy neither food, nor clothes. Only $13 \%$ of the women in the sample evaluated their household's financial position as good, while $29 \%$ considered it to be bad (see Appendix Table).

The financial position of respondents and their place of residence provide indirect information about the degree of difficulty of access to the health service in Poland. All Polish children under 14 and almost all adults are entitled to use the health service free of charge in public health service centres. The percentage of adults who cannot use free medical services is very low and amounts to only $3 \%$ of the total adult population. However, the current reform of the public health service and decline in the state Budget contribution to health care has resulted in higher private expenditure on health. In 1996 individual spending represented $25 \%$ of expenditure on health care. Only households with very high incomes could afford to use private clinics (Baran, 1997).

Our analysis includes marital status and focuses on women who live alone and those who live with children. In Polish society, a correlation between divorce and poor female health status was expected. Divorce is not a common phenomenon in Polish culture, and is socially disapproved. Divorcees constituted only $4 \%$ of the sample; with higher proportions in the age groups 30-44 and 45-59-6\% (see Appendix Table). The decision to divorce is usually taken after many difficult
years, full of stress and tension. Undoubtedly, divorce can influence health, especially for women.

To examine how the social roles of women relate to their health status, the variable "number of children born by a woman" ( $0,1-2,3+$ ) was analysed, but was not statistically significant in any of the models and therefore has been excluded from the data presented. (It should be mentioned that the survey data set did not include information on the children's ages.) Whether women lived with dependent children at home or not was measured indirectly, through a variable describing the presence of children under 15 in the household; $76 \%$ of women aged 30-44 lived with dependent children. For women aged 15-29, 60\% lived with dependent children, but in many cases they are likely to be younger siblings rather than their own children. Twenty percent of older women ( 60 and over) were living with dependent children, mostly their grandchildren under 15.

Behavioural and cultural factors analysed include smoking, participation in sport and obesity. These variables are recognised as strongly correlated with the etiology of many disorders, especially those of the circulatory and respiratory systems. Obesity is a frequent characteristic of many women in Poland; $27 \%$ of the surveyed women were obese, which rose to about $45 \%$ of those aged $45-74$ (see Appendix Table). Body mass index (BMI) was computed from body weight (in kg ) divided by height (in m) squared. (1. Underweight $\mathrm{BMI}<=20$; 2. Average body weight - BMI 20.1-27; 3. Overweight - BMI $>27$.) The high proportion overweight results primarily from nutritional habits and the typical Polish cuisine, which has a prevalence of fatty dishes.

Smoking is encouraged by advertising and the recent stressful socio-economic situation in Poland. It remains popular among both men and women, and also teenagers. In the survey, women aged 30-44 were most likely to be smokers ( $40 \%$ ).

Physical activity was measured from information on women's leisure activities: 1. Intensive - running, competitive sports, or intensive training, gardening (at least 4 h a week); 2. Medium - walking, cycling, etc., at least 4 hours a week; 3. Low - reading, watching TV or other activities which do not employ exercise. Physical activity is low in all age groups except for women aged 15-29, where every third woman reported intensive exercise, and only every fifth reported low physical activity (see Appendix Table).

### 4.2. Statistical methods of analysis

Cox regression model was used in analysing the risk of reporting a given disease. This is a method of multivariate analysis of events, which allows estimation of the functions of hazard for the occurrence of a given event (e.g. morbidity) at a given time after including a range of independent variables, called covariates. The model is defined in the following way:

$$
h(t)=\left[b_{0}(t)\right] \exp \left(\beta_{i} X_{i}\right)
$$

where $b_{0}(t)$ is the baseline hazard and depends only on time, and $\exp \left(\beta_{i} X_{i}\right)=\exp \left(\beta_{1} X_{1}+\ldots .+\beta_{k} X_{k}\right)$ is the second component of the model and depends on the values of the covariates ( $X_{i}$ ) and the regression coefficients $\left(\beta_{i}\right)$.

The hazard function $h(t)$ at time $t$ defines how likely it is that a woman will experience an event, given that the woman has survived to that time. The hazard function is not a probability but a morbidity rate per unit of time. The interpretation of the coefficients for the categorical variables depends on the coding scheme selected. Coefficient $\beta_{i}$ for the category defined as the reference category equals 0 and $\exp \left(\beta_{i}\right)$ has the value of 1 . (Values of the $\exp \left(\beta_{i}\right)$ were presented with the obtained results.) If the coefficients are positive for a given variable category, then $\exp \left(\beta_{i}\right)$ is bigger than 1 i.e. occurrence of this category value is connected with a higher risk of the occurrence of the event under analysis (e.g. reporting a disease) compared with the reference category. For a dichotomous variable, $\exp \left(\beta_{i}\right)$ is the ratio of the estimated hazards for a case with that characteristic to those without that characteristic. This is often called the "relative risk" associated with the variable.

The analysis was conducted for women in five age groups: 15-29, 30-44, 45-59, 60-74 and 75+. This was both because of age differences in morbidity of women, and because of the requirements of the method of analysis. ${ }^{2}$

[^13]Logistic regression was used to analyse self-assessed health by age group using a dichotomous dependent variable: "less than good health" ( $Y=1$ ) versus "good or very good" health $(Y=0)$, as a function of selected independent variables. The logistic model in terms of the log of the odds can be written as:

```
\(\log \{[\operatorname{prob}(\) event \()] /[\operatorname{prob}(\) no event \()]\}=\beta_{0}+\beta_{1} X_{1}+\ldots .+\beta_{k} X_{k}\)
```

where the term prob(event)/prob(no event) is called the odds, and is a ratio of the probability of the occurrence of the event $Y=1$, divided by the probability of the event that $Y=0$.

The logistic coefficient can be interpreted in a similar way to the one in the Cox regression model with regard to the change in the odds (Hosmer and Lemeshow, 1989).

Results presented in the paper include only the variables which were significant in a given model at the $5 \%$ significance level.

## 5. Health status of women and men in Poland

### 5.1. Chronic diseases

The 1996 Health Survey in Poland covered 27 of the most frequently occurring disorders or groups of chronic diseases, which were broadly similar to the International Classification of Diseases. Data about disease prevalence was based on the subjective assessment of respondents and no medical documents or diagnoses were used. Subjective diagnoses by respondents could result in overestimation of more frequent diseases and those easier to self-diagnose and higher rates for women than men. The latter may result from the fact that men tend to be reluctant to reveal illnesses, because doing so is regarded as a sign of weakness.

More women report some kind of chronic illness than men; 68\% of women aged 15 and over compared with $56 \%$ of men. The percentage reporting chronic diseases increases with advancing age. Every second woman aged 15-19 (every fourth in men) stated that they were affected by a chronic disease. The highest percentage of people with a chronic illness is among women aged 70-79, i.e. $95 \%$.

[^14]The 1996 Health Survey showed that women most often suffer from diseases of the circulatory system (see Table 3). For instance, every fifth woman aged 15 and over is affected by hypertensive disease, and $12 \%$ by ischaemic heart disease. The percentage reporting diseases of the skeletal system is also very high ( $23 \%$ ), as is rheumatism ( $22 \%$ ) and neurotic disorders $(18 \%)$. Every fifth woman is subject to chronic liver disease, allergies or endocrine disorders. Women suffer more frequently from the above mentioned diseases than men. However, men report more ulcers of the stomach, duodenum and jejunum ( $9 \%$ men and $6 \%$ women), and more accidents and injuries ( $7 \%$ of men and $4 \%$ of women). The percentage of women reporting five chronic illnesses (hypertensive disease, ischaemic heart disease, duodenal and gastric ulcers, chronic bronchitis and pneumonia, and neurotic disorders) for five age groups is shown in Table 3. A detailed multivariate analysis of these five illnesses is provided in the next section.

Table 3
Prevalence (\%) of main reported health conditions among women by age group

| Health conditions | Age group |  |  |  |  | All 15 <br> and over |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $15-29$ | $30-44$ | $45-59$ | $60-74$ | $75+$ |  |
| Hypertensive disease | 1.1 | 8.0 | 30.0 | 46.9 | 42.6 | 19.2 |
| Ischaemic heart disease | 0.5 | 3.5 | 19.2 | 31.2 | 27.0 | 12.1 |
| Duodenal and <br> gastric ulcers | 1.5 | 7.1 | 9.4 | 7.4 | 5.5 | 6.1 |
| Chronic bronchitis and <br> pneumonia | 1.6 | 3.5 | 8.6 | 13.0 | 14.8 | 6.6 |
| Neurotic disorders | 5.7 | 20.0 | 28.0 | 26.4 | 16.5 | 17.6 |
| Base numbers | 6,593 | 6,827 | 5,222 | 4,861 | 1,663 | 25,166 |

Source: Polish Health Survey 1996.

### 5.2. Health self-assessment

Self-assessment of health based on the Question "How do you assess your health status?" shows the poor health status of women in Poland. More than $60 \%$ of women aged 15 and over assessed their
health status as less than good (Table 4). For men, the percentage was $10 \%$ lower. Only $7 \%$ of women and $10 \%$ of men assessed their health status as very good, while $5 \%$ and $4 \%$ respectively described their health as very poor (see Table 4). The largest group of men considered their health as good $(37 \%)$, whereas the largest group of women considered their health as fair ( $36 \%$ ). The most significant demographic factor that differentiates self assessed health is age. More than $80 \%$ of women aged 15-29 assess their health status as good or very good, which is the case for only $8 \%$ of women aged 60-74.

Table 4
Health self-assessment by sex and age group (row per cent)

| Sex and <br> age group | Very <br> good <br> 1 | Good <br> 2 | Fair | Bad | Very <br> bad <br> 5 | Less than <br> good <br> $(3)+(4)+(5)$ | Base <br> numbers |
| :--- | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Women <br> $15-29$ | 18.8 | 60.8 | 17.5 | 1.9 | 0.2 | 19.6 | 5,155 |
| $30-44$ | 4.8 | 42.9 | 41.9 | 8.9 | 1.1 | 51.9 | 6,301 |
| $45-59$ | 1.8 | 16.2 | 48.4 | 28.6 | 4.6 | 81.6 | 4,860 |
| $60-74$ | 1.4 | 6.2 | 37.7 | 42.7 | 11.9 | 92.3 | 4,511 |
| $75+$ | 1.4 | 5.0 | 31.4 | 42.9 | 18.4 | 92.7 | 1,339 |
| Total $(15+)$ | 6.5 | 31.5 | 36.1 | 20.5 | 4.9 | 61.5 | 22,166 |
| Men |  |  |  |  |  |  |  |
| $15-29$ | 25.5 | 57.6 | 13.4 | 2.4 | 0.3 | 16.1 | 4,430 |
| $30-44$ | 8.6 | 48.1 | 33.6 | 8.2 | 1.1 | 42.9 | 5,060 |
| $45-59$ | 2.7 | 22.9 | 43.9 | 26 | 4.1 | 74.0 | 3,774 |
| $60-74$ | 1.9 | 11.1 | 40.3 | 36.8 | 9.5 | 86.6 | 3,078 |
| $75+$ | 2.1 | 10.2 | 33.6 | 39.8 | 14.3 | 87.7 | 728 |
| Total $(15+)$ | 10.2 | 36.8 | 31.8 | 17.1 | 3.6 | 52.5 | 17,070 |

Source: Polish Health Survey 1996.

The health measures presented show differences in male and female morbidity in Poland. The life of many women is curtailed by illnesses and disabilities, which make performing basic activities and their social roles more difficult. However, these are not usually fatal diseases. Men are less likely to report poor self-assessed health, but their diseases are more serious and they die younger than women. These pat-

Table 5
Odds ratios of self-assessed less than good health for women in different age groups ${ }^{a}$

| Characteristics | Age group |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 15-29 | 30-44 | 45-59 | 60-74 | 75+ |
| Household financial position |  |  |  |  |  |
| Good | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Average | 1.36* | 2.1** | $2.10 * *$ | 2.16** | $2.33 * *$ |
| Bad | 2.17** | $3.66 * *$ | 4.00** | 32.59** | 3.18** |
| Marital status |  |  |  |  |  |
| Never married | 1.00 | 1.00 |  |  | 1.00 |
| Married | 1.41** | 1.48** |  |  | 4.06* |
| Widow | (na) ${ }^{1}$ | 2.25** |  |  | 1.19 |
| Divorced | 1.87* | 1.30 |  |  | 0.72 |
| Education level |  |  |  |  |  |
| Higher | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Secondary | 1.48* | 1.38** | 1.22 | 1.59* | 2.76* |
| Vocational | 1.43* | 1.66** | 1.44* | 2.55** | 1.8 |
| Primary | 1.2 | 1.92** | $1.62^{* *}$ | 2.06** | 4.98** |
| Place of residence |  |  |  |  |  |
| Town 100,000+ |  |  | 0.77* | 0.65* |  |
| Town 20,000-99,999 |  |  | 0.72* | 0.69* |  |
| Town <20,000 |  |  | 0.79* | 0.78 |  |
| Village |  |  | 1.00 | 1.00 |  |
| Employment status |  |  |  |  |  |
| Unemployed |  | 0.88 | 1.06 | 1.17 |  |
| Economically inactive |  | 1.34** | 2.89** | 2.58** |  |
| Employed |  | 1.00 | 1.00 | 1.00 |  |
| Smoking |  |  |  |  |  |
| Current smoker | 1.55** | 1.17** |  | 0.60** |  |
| Former smoker | 1.43** | 1.31** |  | 1.21 |  |
| Never smoked | 1.00 | 1.00 |  | 1.00 |  |
| BMI |  |  |  |  |  |
| Underweight |  | 1.01 | 1.35 |  |  |
| Average weight |  | 1.00 | 1.00 |  |  |
| Excessive weight |  | 1.60** | 1.56** |  |  |
| Physical activity |  |  |  |  |  |
| Intensive | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Medium | 1.40* | 1.06 | 1.13 | 1.13 | 1.49 |
| Low | 1.93** | 1.33** | $1.35 * *$ | 1.72** | 3.11** |


| Household |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Without children (age $\leq 15)$ |  | $1.71^{* *}$ | $1.41^{* *}$ |  |  |
| With children (age $\leq 15)$ |  | 1.00 | 1.00 |  |  |
| One-person household |  |  |  |  |  |
| Yes | 1.00 |  |  |  |  |
| No | $0.40^{* *}$ |  |  |  |  |
| -2Log likelihood (constant) | 4888.47 | 8110.36 | 4109.32 | 2244.61 | 643.14 |
| -2Log likelihood (change in LLR) | 217.05 | 602.26 | 478.32 | 170.39 | 50.49 |

a. Statistically significant at: ${ }^{*} p<0.05 ;{ }^{*} p<0.01$.
(na) ${ }^{1}$ : due to small numbers widows were not taken into account in age group 15-29.
Source: Polish Health Survey 1996.
terns may partly reflect the more developed health consciousness of women, as women more often consult doctors than men and undergo routine medical examinations more frequently.

## 6. Multivariate analyses of selected health conditions and self-assessed health among women

Multivariate analyses presented in this section of the paper examine differences in health status of women in Poland and indicate how social, economic and cultural factors influence these differences. Selfassessed health for women is examined first, followed by analyses of five diseases frequently occurring among women (as shown in Table 3). It is expected that the prevalence of these diseases is connected with the socio-economic transformations and growing social inequalities in Poland.

Self-assessed health for women using the dichotomy "less than good health" versus "good or very good health" showed that the effects of educational level and financial position were statistically significant in all age groups (see Table 5). Describing their own health status as "less than good" is more frequent among women whose financial position is bad or average. The odds ratio (OR) for women assessing the financial situation of their households as "bad" increases from 2.2 for the age group 15-29 to 4.0 in women aged $45-59$, compared to the reference category "good" financial position. Better educated women, and those who live in towns are more likely to perceive their health status as good.

Table 6
Results from Cox regression models showing the effects of selected characteristics on reporting hypertensive disease for women in different age groups ${ }^{a}$


| Household |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Without children (age $\leq$ 15) |  |  |  |  |  |
| With children (age $\leq 15)$ |  |  |  |  |  |
| One-person household |  |  |  |  |  |
| Yes |  |  |  |  |  |
| No |  |  |  |  |  |
| -2Log likelihood (constant) | 967.6 | 9014.6 | $25,392.7$ | $36,723.2$ | 9965.5 |
| -2Log likelihood (change in LLR) | 32.8 | 162.6 | 295.9 | 232.4 | 51.5 |

a. Statistically significant at: ${ }^{*} p<0.05 ;{ }^{* *} p<0.01$.
(na) ${ }^{2}$ : due to small numbers, unemployed persons were not taken into account in age group 60-74.
Source: Polish Health Survey 1996.

Economically inactive women more often report bad health than employed women ( $\mathrm{OR}=2.9$ for age group $45-59$ and $\mathrm{OR}=2.6$ for those aged $60-74$ ). Health self-assessment, especially among younger women (under 44) and the oldest ones is associated with marital status. Married women generally reported poorer health than other women. In particular, never married women report particularly good health at all ages. Women without children in their households more often report bad health than those with children. Other factors included in the analysis, like physical activity, body mass index and smoking were also associated with women's health perception. Health was reported as better among women who took intensive physical exercise, had an average body weight and did not smoke cigarettes.

Hypertensive disease occurred in $21 \%$ of women in the study, especially in women aged 60-74, where nearly half of these women suffered from hypertension (see Table 3). This disease is the main factor associated with atherosclerosis, which is the cause of $50 \%$ of deaths from cardiac diseases in Poland. The etiology of this disease is affected by the impact of disadvantageous environmental factors. These adverse factors, among others, include: exhausting work, permanent haste, lack of relaxation, smoking, little exercise and obesity together with increasing age (Houston et al., 1997).

Excessive body weight was the factor which most influenced the occurrence of hypertension, particularly among younger women but the influence of obesity decreased with age (Table 6). The hazard rate was 5.0 for obese women aged 15-29 while it fell to 1.31 at the age of 75 and over, compared with women who had normal body weight.

Table 7
Results from Cox regression models showing the effects of selected characteristics on reporting ischaemic heart disease for women in different age groups ${ }^{a}$

| Characteristics | Age group |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} 15-29 \\ \text { (na) } \end{gathered}$ | 30-44 | 45-59 | 60-74 | 75+ |
| Housebold financial position <br> Good <br> Average <br> Bad |  |  |  |  |  |
|  |  | 1.00 | 1.00 | 1.00 |  |
|  |  | 1.75* | 1.27* | 1.12 |  |
|  |  | 3.10** | 1.49** | 1.37** |  |
| Marital statusNever marriedMarriedWidowDivorced |  |  |  |  |  |
|  |  | 1.00 | 1.00 | 1.00 | 1.00 |
|  |  | 3.22** | 1.73** | 1.48** | 1.82* |
|  |  | 4.02** | 1.71** | 1.28* | 1.29 |
|  |  | 3.95** | 1.83** | 1.19 | 1.48 |
| Education level |  |  |  |  |  |
| Higher |  |  |  | 1.00 |  |
| Secondary |  |  |  | 1.02 |  |
| Vocational |  |  |  | 1.04 |  |
| Primary |  |  |  | 0.82* |  |
| Place of residence |  |  |  |  |  |
| Town 100,000+ |  |  |  | 1.16* | 1.57** |
| Town 20,000-99,999 |  |  |  | $1.36{ }^{* *}$ | 1.34* |
| Town <20,000 |  |  |  | 1.15 | 1.72** |
| Village |  |  |  | 1.00 | 1.00 |
| Employment status |  |  |  |  |  |
| Unemployed |  | 0.86 | 0.91 | (na) ${ }^{2}$ |  |
| Economically inactive |  | 1.51** | 1.50** | 1.50 |  |
| Employed |  | 1.00 | 1.00 | 1.00 |  |
| Smoking |  |  |  |  |  |
| Current smoker |  | 0.83* | 0.74** | 0.20* |  |
| Former smoker |  | 1.33** | 1.18* | 0.99 |  |
| Never smoked |  | 1.00 | 1.00 | 1.00 |  |
| BMI |  |  |  |  |  |
| Underweight |  | 1.24 | 1.11 | 0.80 |  |
| Average weight |  | 1.00 | 1.00 | 1.00 |  |
| Excessive weight |  | 1.41* | 1.45** | 1.26** |  |
| Physical activity |  |  |  |  |  |
| Intensive |  |  | 1.00 | 1.00 |  |
| Medium |  |  | 1.22* | 1.21* |  |
| Low |  |  | 1.21* | 1.11 |  |


| Household |  |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| Without children (age $\leq 15$ ) |  |  |  |  |  |
| With children (age $\leq 15)$ |  |  |  |  |  |
| One-person household |  |  |  |  |  |
| Yes |  |  |  |  |  |
| No |  |  | 1.00 | 1.00 |  |
| -2Log likelihood (constant) |  | 3983.2 | $16,288.7$ | $24,702.0$ | 6386.7 |
| -2Log likelihood (change in LLR) |  | 60.8 | 135.1 | 147.9 | 38.3 |

a. Statistically significant at: ${ }^{*} p<0.05 ;{ }^{* *} p<0.01$.
(na): not applicable - small numbers of events in a given group.
(na) $)^{2}$ : due to small numbers, unemployed persons were not taken into account in age group 60-74.
Source: Polish Health Survey 1996.

Other significant variables include marital status and education level. The higher the education level, the lower the risk of developing hypertensive disease, which may be connected with the medical knowledge of educated people, eating a better diet and taking more exercise. Living in a bad financial situation is particularly disadvantageous to the health status of women in terms of hypertension. There are large health differences by marital status for women aged 45 and over. Never-married women report the lowest hazard rate of developing hypertensive disease, while the rates for married women are generally higher than those of previously married women (see Table 6). The question emerges, whether the higher hazard rate for married than single women can be attributed to the disadvantageous environmental factors that married women experience, or their obesity which is connected with running the household and preparing meals for the whole family. However, the effect of marriage on health in this analysis is found after also including other variables, such as life style and obesity, in the models.

Living alone at an old age is associated with high blood pressure the hazard rate for people living in one-person households was higher than for women living with others. However, presence of children at home was not significantly associated with reporting hypertensive disease in any age group. Rates of hypertensive disease for smokers (compared with non-smokers) proved lower than expected, surprisingly the risk of reporting hypertensive disease was lower among smokers than for other women.

Table 8
Results from Cox regression models showing the effects of selected characteristics on reporting duodenal and gastric ulcers for women in different age groups ${ }^{a}$


| Household |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Without children (age $\leq$ 15) |  |  |  |  |  |
| With children (age $\leq 15)$ |  |  |  |  |  |
| One-person household |  |  |  |  |  |
| Yes |  |  | 1.00 |  |  |
| No |  |  | $1.59 * *$ |  |  |
| -2Log likelihood (constant) | 1626.2 | 8273.2 | 8139.4 | 5999.7 | 1340.0 |
| -2Log likelihood (change in LLR) | 17.1 | 100.9 | 121.2 | 102.2 | 29.5 |

a. Statistically significant at: ${ }^{*} p<0.05 ;{ }^{* *} p<0.01$.
(na) ${ }^{1}$ : due to small numbers, widows were not taken into account in age group 15-29.
(na) ${ }^{2}$ : due to small numbers, unemployed persons were not taken into account in age group 60-74.
Source: Polish Health Survey 1996.

Ischaemic heart disease is the most frequent cause of death from cardiac disorders, and affects every fifth woman aged 45-59 and every third over 60 (see Table 3).

Hazard factors for women, identified on the basis of regression analysis, are marital status (being married, widow or divorced), poor financial situation of the family, economic inactivity, obesity and not taking physical exercise (see Table 7). Surprisingly, current smokers enjoyed better health than non-smokers. The higher risk observed in those who have given up smoking may be because they are recommended to stop smoking having been diagnosed as having ischemic heart disease. The risk of contracting the disease was higher for older women living in urban than rural areas and for those living alone than with other persons.

Attention should be drawn to the fact that among all age groups of women there were higher hazard rates for economically inactive women. This group covers not only women who do not have a job and do not seek one, but also disabled women. However, poorer health status of economically inactive women could also be attributed to the fact that they run the household or take care of children.

Duodenal and gastric ulcers are a common disorder among women in Poland. Every tenth woman aged 45-59 in the sample and more than $7 \%$ of women aged $30-44$ and $60-75$ suffered from such disorders (see Table 3). The following are recognised as risk factors connected with life style: smoking, alcohol consumption, and unhygienic conditions which cause inflammations.

Table 9
Results from Cox regression models showing the effects of selected characteristics on reporting chronic bronchitis and pneumonia for women in different age groups ${ }^{a}$

| Characteristics | Age group |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 15-29 | 30-44 | 45-59 | 60-74 | $\begin{aligned} & 75+ \\ & (\mathrm{na})^{3} \end{aligned}$ |
| Household financial position |  |  |  |  |  |
| Good | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Average | 1.16 | 1.68* | 1.23 | 1.18 |  |
| Bad | 2.03* | 2.03** | 1.77** | 1.54* |  |
| Marital status <br> Never married <br> Married <br> Widow <br> Divorced |  |  |  |  |  |
|  | 1.00 |  | 1.00 |  |  |
|  | 0.22** |  | 0.63* |  |  |
|  | (na) ${ }^{1}$ |  | 0.61* |  |  |
|  | 0.60 |  | 1.05 |  |  |
| Education level Higher Secondary Vocational Primary |  |  |  |  |  |
|  |  |  | 1.00 |  |  |
|  |  |  | 1.03 |  |  |
|  |  |  | 0.83 |  |  |
|  |  |  | 0.74 |  |  |
|  |  |  |  |  |  |
| Town 100,000+ |  | 1.32* |  | 0.84 |  |
| Town 20,000-99,999 |  | 0.75 |  | 1.28* |  |
| Town <20,000 |  | 0.73 |  | 1.16 |  |
| Village |  | 1.00 |  | 1.00 |  |
| Employment status |  |  |  |  |  |
| Unemployed | 0.95 | 1.21 | 0.74 | (na) ${ }^{2}$ |  |
| Economically inactive | 1.58* | 1.42* | 1.33* | 1.62* |  |
| Employed | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Smoking |  |  |  |  |  |
| Current smoker |  |  | 1.37* | 1.48* |  |
| Former smoker |  |  | 1.00 | 1.36* |  |
| Never smoked |  |  | 1.00 | 1.00 |  |
| BMI |  |  |  |  |  |
| Underweight |  |  | 1.32 | 1.44* |  |
| Average weight |  |  | 1.00 | 1.00 |  |
| Excessive weight |  |  | 1.43** | 1.28* |  |
| Physical activity |  |  |  |  |  |
| Intensive |  |  |  |  |  |
| Medium |  |  |  |  |  |
| Low |  |  |  |  |  |


| Household |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Without children (age $\leq 15$ ) | $0.69^{*}$ | $1.39^{*}$ |  |  |
| With children (age $\leq 15)$ | 1.00 | 1.00 |  |  |
| One-person household |  |  |  |  |
| Yes |  |  |  |  |
| No |  |  |  |  |
| -2Log likelihood (constant) | 1702.5 | 4039.8 | 7399.3 | $10,338.4$ |
| -2Log likelihood (change in LLR) | 54.7 | 32.6 | 73.9 | 73.9 |

a. Statistically significant at: ${ }^{*} p<0.05 ;{ }^{* *} p<0.01$
(na) ${ }^{1}$ : due to small numbers, widows were not taken into account in age group 15-29.
(na) ${ }^{2}$ : due to small numbers, unemployed persons were not taken into account in age group 60-74.
$(\mathrm{na})^{3}$ : all variables were not significant at $p<0.05$.
Source: Polish Health Survey 1996.

Results obtained for women in the survey confirmed the adverse impact of smoking on prevalence of stomach and duodenum ulcers. For female smokers aged $30-74$, risk rates were from 1.6 to 2.2 , compared with non-smokers; similar risk rates were reported by former smokers (see Table 8). A key factor associated with high rates is being divorced. The odds ratio for divorced women is 2.1 which is decisively higher than among other women, for whom the results do not differ significantly from that for never married women. Women living in big towns face a higher risk of reporting duodenal and gastric ulcers than village inhabitants. The BMI measure shows that overweight women face a lower risk of ulcer than other women. Women who are underweight are at the highest risk, since stress may lead to being underweight, as well as women who are permanently watching their body weight may suffer from tension and stress. Being underweight may be not only the cause, but also the result of stomach ulcers.

Cbronic broncbitis and pneumonia. Seven per cent of the respondents suffered from chronic bronchitis or pneumonia. The occurrence of this disease increases across the age groups of women; from $2 \%$ for those aged $15-29$ to $15 \%$ at age 75 and over (see Table 3).

Analysis shows that differences in morbidity from chronic bronchitis and pneumonia are largely attributed to women's style of living and financial position (see Table 9). Women, who have never smoked cigarettes and had average body weight face the lowest risk of developing chronic bronchitis. Poor financial status was accompanied by a higher risk of this health condition. Urban area of residence may be a

Table 10
Results from Cox regression models showing the effects of selected characteristics on reporting neurotic disorders for women in different age groups ${ }^{a}$

| Characteristics | Age group |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 15-29 | 30-44 | 45-59 | 60-74 | 75+ |
| Household financial position Good <br> Average <br> Bad |  |  |  |  |  |
|  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
|  | 1.29 | 1.45** | 1.38** | 1.14 | 1.29 |
|  | 2.20 ** | 1.90 ** | 2.00 ** | 1.46 ** | 1.58* |
| Marital status |  |  |  |  |  |
| Never married | 1.00 | 1.00 |  | 1.00 | 1.00 |
| Married | 0.78* | 0.93 |  | 1.29 | 1.69* |
| Widow | (na) ${ }^{1}$ | 1.12 |  | 1.01 | 1.02 |
| Divorced | 1.65* | 1.44** |  | 1.57* | (na) ${ }^{3}$ |
| Education level |  |  |  |  |  |
| Higher | 1.00 | 1.00 |  |  |  |
| Secondary | 1.90* | 1.14 |  |  |  |
| Vocational | 2.38** | 1.25* |  |  |  |
| Primary | 3.69** | 1.44** |  |  |  |
| Place of residence |  |  |  |  |  |
| Town 100,000+ | 1.36* |  |  | 0.98 |  |
| Town 20,000-99,999 | 1.43* |  |  | 1.18** |  |
| Town <20,000 | 1.69** |  |  | 1.16 |  |
| Village | 1.00 |  |  | 1.00 |  |
| Employment status |  |  |  |  |  |
| Unemployed |  | 1.05 | 1.27** |  |  |
| Economically inactive |  | 1.45** | 1.23** |  |  |
| Employed |  | 1.00 | 1.00 |  |  |
| Smoking |  |  |  |  |  |
| Current smoker |  | 1.36** | 1.26** | 1.08 |  |
| Former smoker |  | 1.31** | 1.14 | 1.36* |  |
| Never smoked |  | 1.00 | 1.00 | 1.00 |  |
| BMI |  |  |  |  |  |
| Underweight |  | 1.26* | 1.38** | 1.17 |  |
| Average weight |  | 1.00 | 1.00 | 1.00 |  |
| Excessive weight |  | 0.89 | 0.90 | 0.87* |  |
| Physical activity |  |  |  |  |  |
| Intensive | 1.00 | 1.00 |  |  |  |
| Medium | 1.37* | 1.04 |  |  |  |
| Low | 1.33* | 1.15* |  |  |  |


| Household |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Without children (age $\leq$ 15) |  |  |  |  |  |
| With children (age $\leq 15)$ |  |  |  |  |  |
| One-person household |  |  |  |  |  |
| Yes |  |  |  |  |  |
| No |  |  |  |  |  |
| -2Log likelihood (constant) | 5990.9 | $22,878.4$ | $23,946.2$ | $21,137.5$ | 3954.1 |
| -2Log likelihood (change in LLR) | 119.3 | 230.0 | 135.7 | 69.2 | 39.0 |

a. Statistically significant at: ${ }^{*} p<0.05 ;{ }^{*} p<0.01$.
(na) ${ }^{1}$ : due to small numbers, widows were not taken into account in age group 15-29.
$(\mathrm{na})^{3}$ : due to small numbers, divorced persons were not taken into account in age group 75+.
Source: Polish Health Survey 1996.
secondary factor, connected with environmental pollution and working conditions. Presence of children in the household lessens the risk for women aged $30-44$ but adds to the risk of reporting the disease in those aged 15-29. However, the analysed factors are of negligible importance for women over 75 . $^{3}$

Neurotic disorders affect one in four women aged 45-74 and 6\% of those aged 15-29 (Table 3). It should be explained that the way in which the survey was carried out (with no medical verification) precludes drawing unequivocal conclusions about whether neurotic diseases as reported here are an indication of emotional problems or poor mental health.

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Development of a neurotic disorder is very often deeply rooted in earlier and current life experiences, particularly in personal life or at work. The analysis showed that being currently employed is positively correlated with the mental health status of women (see Table 10). Feel-

[^15]ings of comfort and security generated by a good financial position are strongly associated with good mental health. Achieving a higher education level is particularly strongly associated with the mental health of younger but not older women. Under the current Polish social situation, the structure of opportunities in the labour market is heavily influenced by educational attainment, which gives younger educated women the feeling of independence and self-worth. Divorce adds to the risk of nervous disorder for women in all age groups, while being married lessens it, but only for younger women. Physical exercise is associated with improved mental health status in younger women. The higher risk of neurotic disorders among smokers may be because smoking is more prevalent among women experiencing tension, stress and depression; which may also be the cause of being underweight.

## 7. Summary and discussion

This study has provided information on the health status of men and women in Polish society during the period of deep social, economic and political transformation, which took place in Poland in the 1990 s. We have shown gender differences in health status, with men disadvantaged by particularly large discrepancies in survival during the working ages, while women report poorer self-assessed health than men at all ages.

The analyses based on women's self-assessed health and the five health conditions demonstrated connections between women's morbidity and socio-economic transformations in Poland. Along with the behavioural and cultural risk factors recognized by medicine, such as obesity, lack of physical exercise and smoking, the paper has shown the important role of socio-economic factors in influencing Polish women's health. The thesis that economic factors are of crucial significance to the health and well-being of families in Poland is supported.

Women, whose financial position is poor, more often than other women, assess their health as less than good, are more likely to suffer from respiratory and circulatory system diseases and they also report more neurotic problems. Poor financial circumstances are likely to have an adverse effect on women's health due to worse living and dwelling conditions, inadequate nutrition and recreation. These women have insufficient financial resources to maintain the household and
meet basic needs of the family, while their own health care is likely to become a secondary issue.

Strongly connected with the transformation process in Poland is the level of education. Higher education level is accompanied not only by higher awareness of health and healthy lifestyle but it also determines life opportunities and position in the labour market, especially for women. A comfortable financial position, job security and high qualifications give women feelings of independence, satisfaction with life and influence positively their health status, particularly the good self-perceived health of young women. Education level is closely associated with the prevalence of all five of the individual disorders under analysis.

Since 1996, when the data were collected, Poland has been undergoing the processes of transformation and adjustment of the country's economy to meet market requirements and joining the European Union. Both advantageous and disadvantageous indicators of economic and social development have been reported in recent years in Poland. The former include, among others, consistent growth of the GDP, relatively stabilised inflation, increasing pay in the public and private sectors, increased numbers of students and persons with university education (CSO, 2000). The disadvantageous changes include a significant increase in the unemployment rate (in September 2000 the unemployment rate was $14 \%$ (CSO, 2000)); the household poverty rate remains high (CSO, 1998; Szulc, 2000) and economic differences between families in Poland are growing. More than $50 \%$ of families can afford to pay only their current bills, while $31 \%$ cannot meet even their basic financial liabilities, and only $13 \%$ of families enjoy high incomes and can afford some extra spending (TNS OBOP, 2000a; TNS OBOP, 2000b). These economic and social patterns may contribute to the deep inequalities in women's health status in Poland as reported in this paper and significantly affect their long-term health status.

Among other important factors, that influence women's health status in Poland, the role of marital status cannot be neglected, since it is associated with many other roles. The results show that never married women, as a rule, enjoy the best health status in each age group. Married women seldom perceived their health as better than women who were never married or divorced, with the exception of younger married women and the analysis of neurotic disorder. These findings for Poland differ from recent research findings in Britain, Finland,

France and other Western countries, which suggest that married women have better health than single or previously married women (Arber and Cooper, 2000; Khlat et al., 2000; Martikainen, 1995). However Polish women with multiple roles report relatively good health, which follows the pattern observed in other European countries. Economically active women enjoy better health than those who are unemployed or economically inactive. Presence of children in the household is associated with better perceived health among women.

Our survey also supports the thesis that loneliness in old age, defined on the basis of living in a one-person household is negatively correlated with health status. This result was obtained for persons aged 60 and over in the case of neurotic disorders and circulatory system diseases.

Results obtained for the variable 'physical activity' lead to the conclusion that intensive physical activity lessens the risk of emotional problems, especially in the case of young women, and these who are physically active perceive their health status as better than those who do not take physical exercise. However, physical activity did not differentiate the results for most of the five conditions (except for circulatory system disorders for women aged 45-59). Smoking was seen as a risk factor in relation to digestive and respiratory disorders and women's self-assessed health as less than good. The surprising finding of women smokers reporting a lower risk of circulatory system diseases requires further research.

The significance of the socio-economic and lifestyle factors under analysis varies with the age of women: they are most important in the case of middle-aged women, less important for younger women and frequently of no statistical significance in the case of older women. This suggests the value for older women of collecting retrospective data, which covered their life histories, and not only collecting information about their current job or education, which in Poland have little effect on the health status of women aged 75 and over. In the case of young women (aged 15-29) two factors limited the usefulness of these analyses: first - the occurrence of some health conditions is relatively infrequent under age 30 , and second - that young women have not yet fully developed some of their careers, e.g. marriage and occupational careers, which reduce the impact of these factors on their health.

The findings in this study provide greater understanding of the main effects of multiple roles and socio-economic position on women's
health in Poland in the mid-1990s during a time of major economic transformation. The association between women's health and their economic situation, marital status and other roles, as well as life style variables, such as obesity, smoking and physical activity, are shown to vary by age group of women. These new Polish findings complement recent studies in Western countries, which have demonstrated that to better understand women's health it is necessary to conduct more detailed research on how women's health is influenced by various combinations of their multiple roles, socio-economic circumstances and the environment in which they live.

Appendix Table
Percentage distribution of variables included for women by age groups (column \%)

| Characteristics | Age group |  |  |  |  | Total | Base numbers |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 15-29 | 30-44 | 45-59 | 60-74 | 75+ |  |  |
| Household financial position |  |  |  |  |  |  |  |
|  | 13.7 | 16.5 | 11.5 | 11.1 | 11.1 | 13.3 | 3,344 |
| Average | 57.5 | 56.4 | 59.6 | 58.7 | 58.5 | 58.0 | 14,544 |
| Bad | 28.8 | 27.1 | 28.8 | 30.2 | 30.4 | 28.7 | 7,206 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 62.2 | 6.5 | 3.5 | 3.5 | 3.8 | 19.7 | 4,947 |
| Married | 36.4 | 85.6 | 77.5 | 51.5 | 15.6 | 59.8 | 15,032 |
| Widow | 0.2 | 2.3 | 13.0 | 42.4 | 79.2 | 16.8 | 4,225 |
| Divorced | 1.2 | 5.5 | 6.0 | 2.7 | 1.4 | 3.7 | 919 |
| Education level |  |  |  |  |  |  |  |
| Higher | 6.9 | 15.0 | 10.2 | 3.1 | 1.3 | 8.7 | 2,180 |
| Secondary | 29.5 | 36.8 | 26.0 | 12.5 | 6.4 | 25.9 | 6,513 |
| Vocational | 24.2 | 29.0 | 16.9 | 5.1 | 1.4 | 18.8 | 4,725 |
| Primary | 39.4 | 19.2 | 46.9 | 79.3 | 90.9 | 46.6 | 11,705 |
| Place of residence |  |  |  |  |  |  |  |
| Town 100,000+ | 17.6 | 19.4 | 19.9 | 17.8 | 15.9 | 18.5 | 4,652 |
| Town 20,000-99,999 | 23.0 | 13.8 | 24.3 | 19.2 | 15.1 | 22.2 | 5,585 |
| Town <20,000 | 14.2 | 14.6 | 13.5 | 12.3 | 10.9 | 13.6 | 3,407 |
| Village | 45.2 | 42.2 | 42.3 | 50.7 | 58.1 | 45.7 | 11,479 |
| Employment status |  |  |  |  |  |  |  |
| Unemployed | 12.2 | 11.4 | 4.8 | 0.2 | 0.0 | 7.3 | 1,835 |
| Economically inactive | 52.6 | 18.1 | 43.8 | 89.1 | 98.1 | 51.5 | 12,922 |
| Employed | 35.2 | 70.5 | 51.5 | 10.6 | 1.9 | 41.2 | 10,347 |


| Smoking |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Current smoker | 19.0 | 40.3 | 23.8 | 7.0 | 1.7 | 22.3 | 5,606 |
| Former smoker | 7.4 | 14.1 | 13.1 | 8.2 | 4.1 | 10.4 | 2,605 |
| Never smoked | 73.5 | 45.5 | 63.1 | 84.8 | 94.2 | 67.3 | 16,912 |
| BMI |  |  |  |  |  |  |  |
| Underweight | 38.7 | 13.5 | 5.7 | 5.4 | 14.3 | 16.9 | 4,255 |
| Average weight | 56.7 | 65.3 | 51.2 | 49.2 | 55.2 | 56.4 | 14,155 |
| Excessive weight | 4.6 | 21.1 | 43.1 | 45.4 | 30.5 | 26.7 | 6,703 |
| Physical activity |  |  |  |  |  |  |  |
| Intensive | 31.9 | 25.1 | 23.2 | 14.0 | 4.3 | 23.0 | 5,773 |
| Medium | 48.3 | 39.6 | 36.6 | 32.9 | 21.2 | 38.7 | 9,732 |
| Low | 19.8 | 35.3 | 40.1 | 53.1 | 74.6 | 38.3 | 9,618 |
| Household |  |  |  |  |  |  |  |
| Without childr. age $\leq 15$ | 39.5 | 24.3 | 73.4 | 80.1 | 80.8 | 53.0 | 13,318 |
| With childr. age $\leq 15$ | 60.5 | 75.7 | 26.6 | 19.9 | 19.2 | 47.0 | 11,805 |
| One-person household |  |  |  |  |  |  |  |
| Yes | 0.9 | 1.5 | 6.2 | 21.0 | 32.6 | 8.1 | 2,047 |
| No | 99.1 | 98.5 | 93.8 | 79.0 | 67.4 | 91.9 | 23,076 |
| Base numbers | 6,572 | 6,814 | 5,214 | 4,859 | 1,664 | 100.0 | 25,123 |

Source: Polish Health Survey 1996.

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# INEGALITES SOCIALES DE MORBIDITE PERINATALE. DONNEES NATIONALES EN FRANCE 

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#### Abstract

Résumé Dans le contexte francais de fortes disparités sociales d'état de santé, mises en évidence surtout autour de la mortalité, cette étude a pour objectif de montrer les différences sociales de morbidité périnatale, et plus particulièrement de prématurité et de retard de croissance intra-utérin. Les données utilisées proviennent d'un échantillon national de naissances constitué en 1995. Les résultats établissent le constat d'une persistance des différences sociales de morbidité périnatale en France à la fin du $20^{\circ}$ siècle. Ils soulignent l'intérêt d'utiliser un indicateur de position sociale, qui prenne en compte simultanément la situation socioprofessionnelle des deux membres du ménage. Compte tenu des réalités sociologiques contemporaines, relatives à la place des femmes sur le marché du travail et aux nouvelles formes familiales, un tel indicateur est plus pertinent que la mesure de la situation socioprofessionnelle d'un seul membre du ménage. Cette étude montre que les différences sociales de prématurité et de retard de croissance intra-utérin ne sont pas totalement expliquées par les facteurs biologiques, médicaux ou comportementaux actuellement identifiés comme les principaux facteurs de risque. Ces résultats invitent à explorer d'autres pistes pour mieux comprendre comment se constituent ces inégalités sociales.


Mots-clés : Morbidité périnatale, Différences sociales, Santé publique, Naissance prématurée, Développement du fotus, France.


#### Abstract

Against the background of France's wide bealth inequalities by social class, particularly the glaring mortality gaps, this study aims to shed light on how social differentials affect perinatal morbidity, particularly the incidence of premature births and intra-uterine growth retardation. Data are used from a national sample of births compiled in 1995. The findings show that differences in perinatal morbidity by social class still exist in late 20th century France and emphasize the value of a social position indicator which allows for the social and work status of both partners in the union. Facts of contemporary life relative to women in the labour force and new family patterns make such an indicator more relevant than measuring the social and work status of one partner alone. This study shows that the social differentials in premature birtbs and intra-uterine growth retardation are not fully explained by the biological, medical and bebavioural variables currently identified as the main risk factors. The findings suggest that other lines of inquiry should be explored to improve our understanding of the origins of these social inequalities.


Keywords: Perinatal morbidity, Social differentials, Public health, Premature births, Intra-uterine growth, France.

## 1. Introduction ${ }^{1}$

La morbidité et la mortalité périnatales caractérisent la santé des nouveau-nés. Dans la mesure où elles sont intimement associées au déroulement de la grossesse et aux caractéristiques biologiques et sociales des femmes, on peut les considérer comme des marqueurs de la santé des femmes, marqueurs de leur «possibilité» d'avoir une grossesse qui se termine par la naissance à terme d'un enfant vivant et de poids normal. En réalité, les caractéristiques paternelles interviennent aussi dans l'état de santé du nouveau-né, même s'il n'est pas toujours aisé de les étudier ou de les mettre en évidence. Dans l'état actuel des connaissances, les caractéristiques maternelles biologiques ou médicales - poids, taille, malformation utérine, hypertension artérielle, diabète,

1. Ce texte reprend, en partie, le travail réalisé dans le cadre de la préparation d'un ouvrage intitulé Inégalités sociales en santé, à paraître en langue française en 2000, aux éditions La Découverte, Collection «Recherche» (éd. par A. Leclerc, D. Fassin, H. Grandjean, M. Kaminski et T. Lang).
etc. - sont plus déterminantes que les caractéristiques paternelles. Nous considérons ici qu'en étudiant la morbidité périnatale, nous contribuons aux connaissances relatives à la santé des femmes, dans le domaine de la santé reproductive.

Au moment d'une naissance comme aux autres âges de la vie, l'indicateur le plus souvent utilisé pour mesurer l'état de santé d'une population est la mortalité. Compte tenu de son niveau élevé à cette étape de la vie, les démographes ont développé plusieurs indicateurs, décomposant la première année de vie en périodes distinctes. Les deux indicateurs les plus utilisés, pour les comparaisons internationales et pour les évolutions dans le temps, sont la mortalité infantile, incluant les décès de la première année de vie, et la mortalité périnatale, incluant les décès in utero - au-delà de 28 semaines d'âge gestationnel - et les décès de la première semaine de vie. Ce second indicateur renseigne plus directement sur les pathologies du déroulement de la grossesse et de l'accouchement. En France, en 1995, la mortalité périnatale était de 7,4 pour 1000 naissances, position moyenne parmi les 15 pays de l'Union Européenne (Eurostat, 1997).

Les inégalités sociales de mortalité générale sont importantes en France, d'amplitude plus importante que dans d'autres pays Européens, ce qui est bien documenté pour la mortalité masculine entre 45 et 64 ans (Mackenbach et al., 1997). Récemment, un constat des disparités sociales de mortalité périnatale et infantile en France a été établi sur les naissances de 1984 à 1989, montrant deux types de différences (Dinh, 1998). D'une part, un excès de mortalité était observé pour les naissances hors mariage comparées aux naissances légitimes. D'autre part, parmi les naissances légitimes, la mortalité périnatale variait de 9,1 pour 1000 pour les enfants dont le père occupait un emploi à 18,4 pour 1000 lorsque le père n'avait pas d'emploi. De plus, parmi les enfants légitimes dont le père occupait un emploi, un gradient était observé de 7,1 pour 1000 lorsque le père occupait un emploi de cadres et professions intellectuelles supérieures à 10,2 pour 1000 lorsque le père était ouvrier. Dans l'état actuel, les données disponibles sur les certificats de naissance et de décès ne permettent pas d'observer les différences sociales de mortalité sur l'ensemble des naissances, et la double sélection - naissances hors mariage, qui représentaient $38 \%$ des naissances vivantes en France en 1995 (Kerjosse et Tamby, 1997), et père inactif - conduit à sous-estimer les écarts sociaux existants sur la totalité des naissances.

Parallèlement aux différences sociales de mortalité périnatale, il est nécessaire de mieux décrire et comprendre les inégalités sociales de morbidité périnatale. En particulier, deux issues pathologiques doivent être considérées: la prématurité et le retard de croissance intra-utérin, qui correspondent à des entités physio-pathologiques différentes et qui constituent actuellement les principales causes de mortalité périnatale, mais aussi de handicaps ou de déficiences à plus long terme.

Notre objectif est de décrire les inégalités sociales de prématurité et de retard de croissance intra-utérin en France à la fin du $20^{e}$ siècle, à travers des données nationales de naissances, et d'analyser quelle est l'amplitude des inégalités sociales persistant après la prise en compte de différents facteurs, morphologiques, médicaux et comportementaux, susceptibles d'expliquer les différences sociales. Notre objectif est également d'attirer l'attention sur la mesure des inégalités sociales, à travers divers indicateurs de la position sociale des femmes. Cette question est transversale à l'ensemble des recherches sur les inégalités sociales de la santé des femmes. En effet, la profession est considérée comme essentielle pour définir la position sociale des hommes, encore que cela pose problème dans les populations où le chômage des hommes est fréquent. Par contre, la profession de la femme ne permet pas de classer l'ensemble de la population féminine, en raison d'une part importante de femmes sans emploi, et la profession du conjoint, qui est souvent utilisée comme proxy de la position personnelle des femmes, ne permet pas de classer les femmes qui n'ont pas de conjoint. Cette question revêt un aspect spécifique quand on s'intéresse à la santé périnatale, dans la mesure où, au moment d'une naissance, l'environnement social des femmes est probablement plus déterminé par la situation du couple et par la situation professionnelle du compagnon qu'à d'autres étapes de la vie ou que pour d'autres questions de santé.

## 2. Méthodes

### 2.1. Données disponibles

Les données proviennent de l'enquête nationale périnatale de 1995. Cette enquête porte sur toutes les naissances survenues en France entre le 30 janvier et le 5 février. Pour la France métropolitaine, l'enquête incluait au total 13147 femmes. Les résultats présentés ici
concernent les femmes ayant eu un enfant unique né vivant, soit 12869 femmes. Les données médicales ont été extraites des dossiers hospitaliers; les données démographiques, sociales et sur le recours aux soins ont été recueillies en interrogeant les femmes pendant leur séjour en maternité. Le protocole et les premiers résultats ont été décrits ailleurs (Blondel et al., 1997).

### 2.2. Indicateurs de santé périnatale

Une naissance est prématurée si elle se produit avant 37 semaines de gestation. La durée de la gestation se calcule en nombre de semaines révolues depuis le 1 er jour des dernières règles. Cette date est informée par la déclaration de la répondante. Actuellement, les échographies du début de la grossesse servent à confirmer et préciser l'âge gestationnel.

Le retard de croissance intra-utérin est défini par un poids de naissance inférieur à un seuil fixé en fonction de la durée de la gestation. Le seuil, différent pour les garçons et pour les filles, est le dixième percentile de la distribution du poids de naissance pour la durée de gestation. Les seuils utilisés dans cette analyse proviennent des données d'une population de référence, extérieures à cette enquête (Mamelle et al., 1996).

### 2.3. Indicateurs de la position sociale

Les quatre indicateurs suivants sont utilisés dans l'analyse :

- le niveau d'études de la femme, selon qu'elle avait ou non atteint les différents cycles du système scolaire français; les femmes non scolarisées ont été jointes au groupe de niveau d'études primaires ;
- la catégorie socioprofessionnelle de la femme, en 9 classes, selon la nomenclature des professions de l'Insee ;
- la catégorie socioprofessionnelle du père de l'enfant, considérée de la même façon, disponible uniquement pour les femmes vivant en couple, mariées ou non ;
- la catégorie socioprofessionnelle du couple, en 6 modalités, selon la profession de niveau le plus élevé dans la hiérarchie socioprofessionnelle, que ce soit celle de la mère ou du père, pour les femmes vivant en couple, et selon la profession de la mère pour celles qui ne vivent pas en couple.

Nous ne disposons pas dans l'enquête nationale de données qui permettraient d'approcher d'autres aspects de la position sociale, comme les ressources financières, par exemple.

### 2.4. Indicateurs pour les facteurs médiateurs des différences sociales

Compte tenu des connaissances disponibles sur l'étiologie de la prématurité et du retard de croissance intra-utérin, nous avons considéré les facteurs suivants: l'âge des femmes, la parité, les antécédents obstétricaux pathologiques, le poids de la mère avant la grossesse, la situation matrimoniale, la nationalité, le statut de la mère vis-à-vis de l'emploi, l'usage du tabac, et un nombre de visites prénatales inférieur au nombre obligatoire fixé par la réglementation.

### 2.5. Analyse statistique

Nous avons comparé les taux de prématurité et de retard de croissance intra-utérin selon la position sociale des femmes, indiquée par les différents indicateurs décrits ci-dessus. Nous avons quantifié l'amplitude des différences sociales à l'aide d'odds ratios. Des odds ratios bruts ont d'abord été calculés. Les différences sociales résiduelles (après la prise en compte des facteurs médiateurs) ont été également quantifiées par des odds ratios ajustés, calculés par régression logistique.

## 3. Résultats et discussion

### 3.1. Mesure des différences sociales

Le tableau 1 montre la distribution des taux de prématurité et de retard de croissance en fonction des caractéristiques sociales. Pour les deux issues de grossesse, le taux est d'autant plus élevé que le niveau d'études des mères est faible: le taux de prématurité passe de $3,4 \%$ pour les femmes ayant un niveau d'études supérieur au baccalauréat à $5,4 \%$ pour les femmes ayant un niveau d'études primaire, et le taux de retard de croissance, de $5,8 \%$ à $9,9 \%$ pour les mêmes groupes. Les tendances sont identiques avec la catégorie socioprofessionnelle de la mère, celle du père et celle du couple. Les écarts sont un peu plus im-

Tableau 1
Taux de prématurité et d'hypotrophie selon les caractéristiques sociales de la femme et du père.
Enquête nationale périnatale 1995, naissances vivantes uniques

|  | Effectifs | Prématurité ${ }^{a}$ \% | Hypotrophie ${ }^{b}$ \% |
| :---: | :---: | :---: | :---: |
| Total | 12777 | 4,5 | 7,6 |
| Niveau d'études de la mère |  |  |  |
| Primaire ${ }^{\text {c }}$ | 709 | 5,4 | 9,9 |
| Secondaire $1^{\text {er }}$ cycle | 4930 | 5,4 | 8,5 |
| Secondaire $2^{\text {c }}$ cycle | 2474 | 4,0 | 8,3 |
| Supérieur | 3943 | 3,4 | 5,8 |
| Catégorie socioprofessionnelle de la fermme |  |  |  |
| Agricultrices, commerçantes, artisanes | 379 | 5,3 | 8,8 |
| Cadres et profess. intellect. supérieures | 941 | 3,4 | 5,1 |
| Professions intermédiaires | 1969 | 3,6 | 5,8 |
| Employées (bureau) | 3335 | 4,1 | 7,2 |
| Employées (commerce) | 1071 | 4,5 | 8,9 |
| Personnel de service | 1176 | 4,8 | 8,8 |
| Ouvrières qualifiées | 565 | 4,4 | 7,3 |
| Ouvrières non qualifiées | 796 | 5,4 | 9,8 |
| Sans profession ${ }^{d}$ | 2124 | 5,6 | 8,5 |
| Catégorie socioprofessionnelle du pèree ${ }^{\text {e }}$ |  |  |  |
| Agriculteurs, commerçants, artisans | 1156 | 4,8 | 8,6 |
| Cadres et profess. intellect. supérieures | 1683 | 3,6 | 4,6 |
| Professions intermédiaires | 1878 | 3,4 | 5,3 |
| Employés (bureau) | 1453 | 4,6 | 7,1 |
| Employés (commerce) | 335 | 3,4 | 8,1 |
| Personnel de service | 171 | 3,5 | 9,4 |
| Ouvriers qualifiés | 3478 | 4,4 | 8,1 |
| Ouvriers non qualifiés | 1123 | 5,0 | 9,6 |
| Sans profession ${ }^{d}$ | 196 | 9,2 | 11,3 |
| Catégorie socioprofessionnelle du couple $f$ |  |  |  |
| Cadres et profess. intellect. supérieures | 2042 | 3,4 | 4,4 |
| Professions intermédiaires | 2552 | 3,6 | 6,4 |
| Employés (bureau) | 2942 | 4,4 | 7,8 |
| Agriculteurs, commerçants, artisans | 745 | 5,4 | 10,0 |
| Employés (commerce), ouvriers, personnel de service | 3793 | 5,2 | 9,0 |
| Sans profession dans le couple ${ }^{d}$ | 492 | 5,7 | 12,1 |

[^16]a. Naissances avant 37 semaines révolues de gestation.
b. Naissances de poids inférieur au $10^{\mathrm{e}}$ percentile pour l'âge gestationnel d'une population de référence (Mamelle et al., 1996).
c. Y compris les femmes non scolarisées.
d. Les personnes au chômage déclarant une profession sont classées en fonction de celle-ci.
$e$. Pour les femmes vivant en couple, mariées ou non.
f. Classée selon la profession de niveau le plus élevé dans l'ordre de la liste, que ce soit celle de la femme ou du père, pour les femmes vivant en couple, et selon la profession de la femme pour celles qui ne vivent pas en couple. Nomenclature PCS 1982.
portants pour le retard de croissance que pour la prématurité. Pour les deux indicateurs de santé, on note la situation défavorable des femmes agricultrices, artisanes ou commerçantes, et des couples appartenant à cette catégorie ou à celle des employés de commerce, personnels de service ou ouvriers, ainsi que le risque particulièrement élevé de retard de croissance intra-utérin pour les enfants des couples sans profession.

Il est difficile de comparer simplement les écarts entre les situations sociales extrêmes, dans la mesure où les quatre indicateurs de la position sociale utilisés n'ont pas le même nombre de modalités, ni la même distribution dans l'échantillon. Néanmoins, on peut observer que l'écart de prématurité le plus important est observé avec la catégorie socioprofessionnelle du père, de $3,4 \%$ à $9,2 \%$. L'amplitude de cet écart est due au risque élevé enregistré dans le groupe de naissances dont le père est sans profession, groupe de faible effectif parmi les femmes vivant en couple. Pour le retard de croissance intra-utérin, l'indicateur montrant l'écart le plus important est la catégorie socioprofessionnelle du ménage ; ceci en raison, d'une part, du taux le plus faible observé parmi les naissances des ménages de cadres et professions intellectuelles supérieures et, d'autre part, du taux le plus élevé parmi les naissances des ménages n'ayant pas de profession, ces deux situations ne correspondant pas à des sous-groupes d'effectif faible. Le groupe de ménages sans profession est d'effectif plus élevé que le groupe de pères sans profession, car il comprend aussi les ménages composés de femmes vivant seules et sans profession.

Ces résultats conduisent à privilégier l'indicateur décrivant le groupe socioprofessionnel du ménage, qui montre des différences sociales nettes et qui peut s'appliquer à l'ensemble des femmes, actives ou non, vivant en couple ou non. Cet indicateur apporte une information
indirecte à la fois sur les disponibilités financières du ménage et sur le milieu socioculturel dans lequel le ménage évolue et peut tisser des relations sociales. Le niveau d'études doit être considéré parallèlement, car il mesure une autre dimension de la position sociale, reflet indirect du milieu social d'origine et du capital culturel propre à la femme.

### 3.2. Différences sociales dans l'issue de la grossesse : les médiateurs

Pour mieux comprendre les liens entre les facteurs sociaux et la prématurité ou le retard de croissance intra-utérin, nous pouvons prendre en compte simultanément les facteurs sociaux et les autres facteurs connus comme influençant ces issues de la grossesse à l'aide de modèles multivariés appropriés. Cependant, les deux dimensions de la position sociale que sont le niveau d'études et le groupe socioprofessionnel sont trop fortement liées entre elles pour pouvoir être analysées simultanément dans un même modèle. Par exemple, en 1995, parmi les femmes de niveau d'études primaire, $70 \%$ appartiennent à des couples «employés de commerce, ouvriers et personnels de service», et $4 \%$ à des couples classés «cadres» ou «professions intermédiaires»; à l'inverse, parmi les femmes de niveau d'études supérieur, $5 \%$ appartiennent à la première catégorie, $76 \%$ à la deuxième. Ceci nous a conduites à analyser séparément le lien de l'issue de la grossesse avec le niveau d'études de la mère, d'une part, la catégorie socioprofessionnelle du couple, d'autre part.

Globalement, il y a consensus dans la littérature sur le rôle de certains facteurs dans l'étiologie de la prématurité ou du retard de croissance (Berkowitz et Papiernik, 1993; Kramer, 1998) : des facteurs plutôt «biologiques», comme une grossesse aux âges extrêmes de la vie reproductive, une première grossesse, des antécédents de naissance d'enfant prématuré ou de petit poids, un poids maternel faible avant grossesse, et des facteurs liés aux conditions et aux modes de vie, comme l’origine étrangère, le fait de vivre seule, de ne pas avoir d'emploi, une surveillance prénatale insuffisante (qui interviennent surtout sur le risque de prématurité), ou le fait de fumer (qui intervient surtout sur la croissance du fæetus).

Cette sélection de facteurs repose sur l'état de la littérature et ne correspond pas toujours à la situation actuelle en France. Même si l'origine étrangère reste un facteur de risque de mortalité infantile
(Dinh, 1998), son rôle comme facteur de risque de prématurité ou de retard de croissance n'est pas si évident. En France, en 1981, les différences étaient faibles (Foix-L'Hélias et al., 2000) ; en 1995, elles n'apparaissent plus. De la même manière, le fait de vivre seule ou en couple, et pour les femmes en couple le fait d'être mariée ou non, influaient sur le risque de prématurité en 1981 ; ce facteur y est beaucoup moins associé en 1995.

Tableau 2
Risque de prématurité et d'hypotrophie selon le niveau d'études de la femme et la catégorie socioprofessionnelle du couple, après prise en compte des autres facteurs.
Enquête nationale périnatale 1995, naissances vivantes uniques

|  | Prématurité |  |  | Hypotrophie |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{OR}^{a}$ | ORa ${ }^{6}$ | IC $95 \%{ }^{\text {c }}$ | $\mathrm{OR}^{a}$ | ORa ${ }^{\text {b }}$ | IC $95 \%{ }^{\text {c }}$ |
| Niveau d'études de la mère |  |  |  |  |  |  |
| Primaire ${ }^{d}$ | 1,6 | 1,3 | 0,8-2,1 | 1,8 | 2,0 | 1,4-2,8 |
| Secondaire $1^{\text {er }}$ cycle | 1,6 | 1,4 | 1,1-1,8 | 1,5 | 1,3 | 1,0-1,5 |
| Secondaire $2^{\text {e }}$ cycle | 1,2 | 1,2 | 0,9-1,6 | 1,5 | 1,4 | 1,1-1,7 |
| Supérieur | 1,0 | 1,0 |  | 1,0 | 1,0 |  |
| Catégorie socioprofessionnelle du couple ${ }^{\text {d }}$ |  |  |  |  |  |  |
| Cadres et professions intellect. supérieures | 1,0 | 1,0 |  | 1,0 | 1,0 |  |
| Profess. intermédiaires | 1,1 | 1,0 | 0,7-1,4 | 1,5 | 1,3 | 1,0-1,8 |
| Employés (bureau) | 1,3 | 1,2 | 0,9-1,7 | 1,8 | 1,6 | 1,3-2,1 |
| Agriculteurs, commerçants, artisans | 1,6 | 1,3 | 0,8-2,1 | 2,4 | 2,2 | 1,6-3,1 |
| Employés (commerce), ouvriers, p. de service | 1,6 | 1,4 | 1,0-1,9 | 2,1 | 1,8 | 1,4-2,4 |
| Sans profession dans le couple | 1,7 | 1,0 | 0,5-2,0 | 3,0 | 1,4 | 0,9-2,4 |

a. Odds ratios bruts.
b. Odds ratios ajustés sur l'âge de la mère, la parité, les antécédents obstétricaux pathologiques, le poids de la mère, la situation matrimoniale, la nationalité, le statut de la mère vis-à-vis de l'emploi, l'usage du tabac, et un nombre de visites prénatales inférieur à la réglementation.
c. Intervalle de confiance à $95 \%$ pour l'odds ratio ajusté.
d. Voir les notes du tableau 1.

Ces facteurs de risque de prématurité ou de retard de croissance sont d'autant plus fréquemment observés que la situation des femmes se situe au bas de la hiérarchie sociale. Le pourcentage de femmes vivant seules passe de $3 \%$ parmi les femmes ayant un niveau d'études supérieur à $10 \%$ parmi les femmes ayant un niveau d'études correspondant au premier cycle du secondaire, le pourcentage de femmes sans emploi, de $22 \%$ à $47 \%$, le pourcentage de fumeuses, de $16 \%$ à $33 \%$. À ce titre, ces facteurs contribuent aux inégalités sociales d'issue de la grossesse. Deux exceptions concernent l'âge maternel élevé et la primiparité : ce sont des facteurs de risque pour l'issue de la grossesse et ils sont plus fréquents dans les groupes sociaux favorisés. Le pourcentage des femmes de moins de 25 ans passe de $29 \%$ parmi les femmes de niveau d'études de premier cycle du secondaire, à $10 \%$ parmi les femmes de niveau d'études supérieur ; à l'inverse, le pourcentage de femmes de 35 ans et plus passe de $10 \%$ à $14 \%$.

Le tableau 2 montre comment les risques de prématurité et de retard de croissance varient en fonction du niveau d'études de la mère et de la catégorie socioprofessionnelle du couple, après ajustement sur tous les facteurs listés plus haut. Tous ces facteurs ont été pris en compte dans l'analyse, au risque d'un surajustement, et donc d'une sous-estimation des risques associés à la situation sociale. Les risques associés aux deux indicateurs sociaux ont diminué par rapport aux observations brutes, ce qui montre que ces facteurs contribuent aux différences sociales. Toutefois, des écarts subsistent, en particulier pour le retard de croissance, pour lequel l'odds ratio associé au niveau d'études varie de 1 à 2 et celui associé au groupe professionnel de 1 à 2,2 . Ces différences suggèrent que d'autres mécanismes doivent intervenir.

### 3.3. Hypothèses pour une meilleure compréhension des différences sociales

Parmi les mécanismes évoqués, la littérature avance souvent des facteurs individuels comme les comportements à risque (consommation de tabac, d'alcool), les expositions professionnelles et environnementales, l'accès et le recours aux soins et la qualité de ceux-ci, des facteurs nutritionnels et, pour la prématurité, les infections génitourinaires, dont la fréquence serait plus grande dans les groupes sociaux défavorisés (Berkowitz et Papiernik, 1993 ; Kramer, 1998). L'exposition à de nombreux facteurs de stress, comme des conditions de vie
habituelle difficiles, ou des événements de vie stressants tels qu’une perte d'emploi, le décès ou la maladie grave d'un proche, une moins grande capacité à y faire face, un soutien social insuffisant, sont aussi proposés comme des éléments médiateurs conduisant aux inégalités sociales d'issue de grossesse (Rutter et Quine, 1990). Toutefois, si ces facteurs sont effectivement plus souvent présents dans les groupes sociaux défavorisés, leur rôle étiologique dans la prématurité ou le retard de croissance commence seulement à être exploré.

L'idée prévaut souvent que, si une étude pouvait prendre en compte tous les facteurs en même temps, toute l'amplitude des différences sociales serait expliquée (Kramer, 1998). Cependant, cela mérite d'être discuté pour plusieurs raisons. D'une part, la réalisation d'une telle étude serait techniquement difficile à mettre en œuvre, en raison du nombre élevé d'informations qu'il faudrait recueillir et de la taille nécessaire de l'échantillon pour assurer une validité statistique aux conclusions. D'autre part, cette idée repose sur le concept que les différences sociales observées se constituent uniquement par des mécanismes agissant à l'échelle individuelle. Or on peut penser que des facteurs interviennent également à un niveau collectif, comme le fonctionnement des réseaux auxquels appartiennent les femmes, et notamment le développement socio-économique, les habitudes de vie et la cohésion sociale des lieux ou des groupes dans lesquels les femmes évoluent (Kawachi et al., 1999). Ces facteurs contextuels peuvent avoir un effet direct sur la santé, ou bien moduler l'effet des facteurs individuels. Le tôle étiologique d'une caractéristique individuelle peut, en effet, dépendre de sa signification sociale dans la population, de sa fréquence et des facteurs associés qui peuvent interagir avec elle. On peut, par exemple, se demander si le fait de ne pas exercer soi-même d'activité professionnelle influe de manière différente sur la santé périnatale selon que l'on vit dans une zone à fort ou faible taux d'activité, et donc que l'on se trouve sur le plan social dans une situation «marginale » ou «normale» par rapport au milieu dans lequel on vit. Ce type de question peut être abordée dans le cadre d'analyses multi-niveaux, qui permettent de prendre en compte simultanément des variables considérées à l'échelle collective et des facteurs individuels (Von Korff et al., 1992).

Les premiers travaux sur les déterminants collectifs de la santé périnatale portent sur le petit poids de naissance (Roberts, 1997 ; O'Campo et al., 1997). Ils montrent comment des caractéristiques de la zone d'habitat, comme le taux de chômage, le pourcentage de familles
au-dessous du seuil de pauvreté, le revenu moyen, la distribution du niveau d'études, de la catégorie socioprofessionnelle, ou la surpopulation des logements, sont associées au risque de petit poids de naissance, même après prise en compte des caractéristiques sociales individuelles. Ils suggèrent également que l'effet de ces caractéristiques individuelles varie selon le niveau de développement socioéconomique de la zone d'habitat, et que le risque lié aux situations individuelles défavorisées serait plus grand dans un environnement social favorisé.

Parmi les autres processus évoqués pour expliquer les différences sociales de santé périnatale figure la mobilité sociale. Les travaux d'Illsley à Aberdeen (Illsley, 1983) ont analysé l'issue de la grossesse (mortalité périnatale et petit poids de naissance) en fonction de la catégorie socioprofessionnelle du père de la femme et de celle de son conjoint: ils montrent des différences d'issue de la grossesse plus grandes en fonction de la catégorie sociale actuelle (celle du conjoint) que de celle d'origine (celle du père), même si cette dernière intervient également. Des données danoises plus récentes (Basso et al., 1997) montrent comment le changement de catégorie sociale du couple entre deux naissances successives affecte le risque d'avoir un enfant de petit poids de naissance : quel que soit le niveau social enregistré lors de la première naissance, une diminution du niveau social entre les deux naissances est associée à une augmentation importante du risque de petit poids, une augmentation du niveau social à une diminution de ce risque. Toutefois, ces résultats ne permettent pas de savoir si la mobilité sociale, en tant que telle, a un effet - positif si ascendante et négatif si descendante - sur l'issue de la grossesse. Par contre, ils montrent que la catégorie sociale du couple au moment de la grossesse est plus prédictive de la naissance d'un enfant de petit poids que la catégorie sociale antérieure.

## 4. Conclusion

Cette étude dresse le constat d'une persistance des différences sociales de morbidité périnatale en France à la fin du $20^{\circ}$ siècle. Les résultats soulignent l'intérêt d'utiliser plusieurs indicateurs de la position sociale. Pour les questions de santé liées à la naissance, comme probablement pour la santé des jeunes enfants, un indicateur décrivant la position sociale du ménage doit être privilégié, qui prend en compte
simultanément la situation socioprofessionnelle des deux membres du ménage. Compte tenu des réalités sociologiques contemporaines relatives à la place des femmes sur le marché du travail et aux nouvelles formes familiales, un tel indicateur est plus pertinent que la mesure de la situation socioprofessionnelle d'un seul membre du ménage.

Les différences sociales de prématurité et de retard de croissance intra-utérin ne sont pas totalement expliquées par les facteurs biologiques, médicaux ou comportementaux actuellement identifiés comme les principaux facteurs de risque. Ces résultats invitent à explorer d'autres pistes, notamment l'étude des interactions entre des facteurs de contexte et des caractéristiques individuelles, pour mieux comprendre comment se constituent ces inégalités sociales.

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# MULTIPLE ROLES AND HEALTH AMONG BRITISH AND FINNISH WOMEN: THE INFLUENCE OF SOCIOECONOMIC CIRCUMSTANCES* 

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#### Abstract

Objectives. Two contrasting hypotheses bave been presented to predict women's bealth variations. The multiple burden bypothesis predicts that combining a paid job, being married, and having children is likely to be detrimental to women's health. The multiple attachment hypothesis predicts that multiple roles provide attachment to the community, which is likeely to be beneficial to women's health. These bypotheses are examined in Britain and Finland, which bave different patterns of women's employment participation. Lone mothers form a critical case, since they have fewer attachments and greater burdens, and therefore are expected to bave poorer bealth. The socioeconomic position of lone mothers differs in Britain and Finland, but in both societies they are likely to bave fewer attachments. We assess the extent to which health variations between women with different family and parental role combinations are because of differences in their socioeconomic status and material circumstances.


[^17]Data and methods. Comparable surveys from Britain and Finland from 1994 were used. Perceived general health and limiting long-standing illness were analysed for working age women (20-49 years) by family type and employment status, as well as other socioeconomic variables.

Results. In both countries, women living in two parent families and having children had better health than women living in other family types or on their own. Lone mothers form a disadvantaged group and showed overall worse bealth in both countries. Adjusting for employment status, education and household income weakened the association between family type and poor health.

Conclusion. The findings are broadly in accordance with the multiple attachment bypothesis. Despite the more generous welfare state and bigh full-time employment among Finnish women, single lone mothers report poorer health than other women in Finland as well as in Britain. However, in Britain the disadvantaged social position of lone mothers accounts for a greater proportion of their poor health than in Finland.

Keywords: Women, Health, Work, Family, Britain, Finland.

## Résumé

Objectifs. Deux bypothèses de sens opposé sont avancées pour expliquer les variations de la santé des femmes. Selon l'hypothèse de la multiplicité des tâches, avoir à la fois un mari, des enfants et un emploi rémunéré peut être néfaste pour la santé de la femme. Selon l'bypothèse de la multiplicité des appartenances, avoir plusieurs rôles procure à la femme une intégration dans la collectivité qui peut être bénéfique pour sa santé. Les auteurs testent ces deux bypothèses sur les cas de la Grande-Bretagne et de la Finlande, deux pays qui different l'un de l'autre en ce qui concerne la participation des femmes à l'activité économique. Les mères isolées constituent un cas critique, car elles ont moins d'appartenances et plus de charges que les autres, et par conséquent, leur santé doit être moins bonne. Les mères isolées n'ont pas la même situation socio-économique en Grande-Bretagne qu'en Finlande, mais dans les deux sociétés elles ont tendance à avoir un éventail d'appartenances plus restreint. Les auteurs examinent dans quelle mesure les différences de santé entre femmes qui vivent des combinaisons diverses de rôles familiaux et parentaux sont dues au fait qu'elles sont dans des situations socio-économiques et matérielles différentes.

Données et méthodes. Les auteurs exploitent des données d'enquêtes comparables réalisées en 1994 en Grande-Bretagne et en Finlande. L'analyse porte sur la perception de l'état de santé général et les maladies invalidantes de longue durée chez.
les femmes d'age actif (20-49 ans), en fonction de la forme d'organisation familiale, du degré d'activité et d'autres variables socio-économiques.

Résultats. Dans les deux pays, les femmes qui vivent avec leurs enfants dans une famille à deux parents sont en meilleure santé que celles qui vivent seules ou dans d'autres types de familles. Les mères isolées constituent un groupe défavorisé et leur santé est généralement moins bonne. Quand on contrôle l'activité économique, le niveau d'instruction et le revenu du ménage, l'association entre le type d'organisation familiale et l'état de santé se relache.

Conclusion. En gros, les résultats concordent avec l'hypothèse de la multiplicité des appartenances. En Finlande, malgré un État-providence plus généreux et un taux d'activité féminine à temps plein plus élevé, les mères célibataires isolées se déclarent en moins bonne santé que les autres femmes, tout comme en GrandeBretagne. Mais en Grande-Bretagne, la mawvaise santé des mères isolées tient beaucoup plus qu'en Finlande à leur situation sociale défavorisée.

Mots-clés : Femme, Santé, Travail, Famille, Grande-Bretagne, Finlande.

## 1. Introduction

This paper focuses on health variations among working age women in two different welfare states, that is Britain and Finland in the mid-1990s. The production of health variations among women is a complex process, emerging from women's social structural and material position as well as their family status and parental roles (Arber, 1991). The two countries under study differ in the nature of welfare policies to support child care among working mothers and to support lone mothers, as well as in the level of paid employment of women (Forssén, 1998). They therefore provide appropriate cases for comparing to what extent the patterning of women's health by employment and family status varies in Britain and Finland, and to what extent this variation is because of their differential socioeconomic and material circumstances (Arber and Lahelma, 1993a).

Among men health variations have traditionally been studied using a social class framework, whereas among women a role framework has been common. For example, studies have examined whether family and parental roles, as well as the 'additional' role of paid employment are associated with women's health (Nathanson, 1980; Gove, 1984).

However, to deepen the understanding of the production of health variations among women we need to go beyond both the social class framework and the role framework, and examine women's employment participation, socioeconomic status and material circumstances simultaneously with their family and parental roles. An increasing stream of research has shown the importance of combining women's structural and material position in society, and their family roles in the analysis of health variations (Bartley et al., 1992; Popay et al., 1993; Macran et al., 1994; Macran et al., 1996; Martikainen, 1995; Arber and Cooper, 2000).

Previous studies suggest that marriage is supportive of good health (Verbrugge, 1979; Macintyre, 1992; Martikainen, 1995). On the one hand, this is likely to be due to social supports and material advantages of marriage. On the other hand, poorer health of unmarried women may relate to selection in the 'marriage market' since women with poor health may be less likely to marry. Being a lone mother seems to be a particularly disadvantageous position for women, including for their health, as found by a number of recent studies (Burström et al., 1999; Kivelä and Lahelma, 2000; Whitehead et al., 2000). Lone motherhood implies responsibilities and strains of child rearing which cannot be shared and which therefore may have adverse effects on women's health. However, employment status as well as the material and socioeconomic position of lone mothers vary between different societies, and this is likely to contribute to variations in the health status of women with different family and parental statuses.

Non-employed women, including housewives and unemployed, may have difficulties finding a job if their health is poor. Khlat, Sermet and Le Pape (2000) have shown that in France health advantages are found for married women who have a paid job. They discuss the 'healthy married' and 'healthy mother' effect, in addition to the 'healthy worker' effect which has been known for a long time. However, the combinations of different family and work roles may be shaped by women's socioeconomic status as the authors show for French women.

A study examining mental and somatic symptoms found that Finnish women living with a spouse and children were least likely to report these symptoms, which remained unchanged when age and number of children were adjusted for (Kivelä and Lahelma, 2000). Recent studies reported in this volume from the Netherlands (Fokkema),

Britain (Matthews and Power) and Canada (McDonough et al.; Walters and McDonough) also support the conclusion that combining multiple roles of being an employee, a spouse and a mother are associated with good rather than poor health. There is by now increasing evidence suggesting the health advantages related to multiple roles among women, but less is known to what extent this is caused by differential socioeconomic and material circumstances associated with role occupancy.

## 2. Women's employment and family status in Britain and Finland

Whether combining being an employee, a spouse and a mother is good or bad for women's health and well-being has become an increasingly important policy issue in many countries, because of the increased labour force participation of women with dependent children (Rubery et al., 1997). Different employment arrangements, such as parttime and full-time employment, may contribute to women's health in varying ways according to a women's family status, and socioeconomic circumstances. It is important to consider how different family status arrangements, such as being married with or without dependent children, being a lone mother or living without a partner, may have a differential bearing on women's health and well-being.

The two countries compared in this paper, Britain and Finland, show similarities and dissimilarities as to women's position in the labour market, the nature of social welfare policies, as well as family structure. With regard to employment participation, Finland is an extreme case since women are equally likely to be in full-time employment as men, and employment participation shows no gender differences throughout the age range (Figure 1). The proportion of part-time employed women is only seven percent of all women aged $20-49$, whereas in Britain this proportion is 27 percent (Table 1). The employment pattern across the age structure is very different for British women compared to their Finnish counterparts. Particularly high proportions of British women are employed part-time at ages 30-54 (Figure 1). Although British women have increasingly taken paid jobs outside the home, their employment participation is still lower on average than in Finland. The difference between the two countries in full-

Table 1
Distribution of variables and age-adjusted prevalence of 'less than good' perceived health and limiting long-standing illness among British and Finnish women aged 20-49

| Variables | Britain |  |  | Finland |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Col. \% | Perceived health (\%) | $\begin{array}{\|c\|} \hline \begin{array}{c} \text { Limiting } \\ \text { long- } \\ \text { standing } \\ \text { illness }(\%) \end{array} \\ \hline \end{array}$ | Col. \% | Perceived health (\%) | Limiting longstanding illness (\%) |
| Total | 5,163 | 31 | 14 | 2,595 | 22 | 23 |
| Age |  | * | * |  | * | * |
| 20-29 | 31 | 29 | 10 | 26 | 12 | 18 |
| 30-39 | 37 | 31 | 14 | 37 | 20 | 22 |
| 40-49 | $\begin{gathered} 32 \\ (5,163) \end{gathered}$ | 36 | 19 | $\begin{gathered} 37 \\ (2,595) \end{gathered}$ | 32 | 27 |
| Family type |  | * | * |  |  |  |
| Couple with children | 56 | 29 | 13 | 59 | 22 | 22 |
| Couple, with no childr. | 18 | 31 | 14 | 19 | 22 | 21 |
| Lone mother, divorced | 6 | 45 | 25 | 3 | 22 | 26 |
| Lone mother, single | 9 | 43 | 20 | 6 | 24 | 23 |
| Single (no children) | $\begin{gathered} 11 \\ (5,146) \end{gathered}$ | 36 | 18 | $\begin{gathered} 13 \\ (2,489) \end{gathered}$ | 27 | 26 |
| Employment status |  | * | * |  | * | * |
| Full-time employed | 42 | 28 | 10 | 61 | 21 | 20 |
| Part-time employed | 27 | 27 | 10 | 7 | 22 | 23 |
| Unemployed | 5 | 37 | 19 | 13 | 28 | 31 |
| Housewife | 21 | 40 | 18 | 9 | 23 | 26 |
| Retired or disabled | 2 | 95 | 91 | 1 | 84 | 86 |
| Other | $3$ | 51 | 28 | 9 | 15 | 16 |
|  | $(5,080)$ |  |  | $(2,586)$ |  |  |
| Education |  | * | * |  | * | * |
| Higher | 31 | 25 | 12 | 18 | 13 | 17 |
| Secondary | 45 | 33 | 14 | 60 | 22 | 22 |
| Basic | 24 | 40 | 18 | 22 | 30 | 27 |
|  | $(4,771)$ |  |  | $(2,595)$ |  |  |
| Household income |  | * | * |  |  |  |
| 1. Highest quintile | 20 | 22 | 9 | 20 | 16 | 19 |
| 2. | 20 | 27 | 11 | 20 | 21 | 23 |
| 3. | 20 | 33 | 14 | 20 | 26 | 25 |
| 4. | 20 | 36 | 18 | 20 | 27 | 24 |
| 5. Lowest quintile | 20 | 40 | 18 | 20 | 24 | 25 |
|  | $(4,480)$ |  |  | $(2,595)$ |  |  |


| Number of children |  |  | $*$ |  | $*$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| No children | 44 | 33 | 17 | 39 | 25 | 26 |
| One | 23 | 34 | 14 | 24 | 25 | 23 |
| Two | 22 | 31 | 11 | 25 | 22 | 22 |
| Three or more | 10 | 36 | 11 | 12 | 15 | 18 |
| Age of children | $(5,159)$ |  |  | $(2,595)$ |  |  |
| No children <br> Pre-school only <br> School-aged only <br> Children in both age <br> groups | 44 | 33 | $*$ |  | $*$ |  |
|  | 13 | 32 | 11 | 39 | 25 | 26 |
|  | 12 | 32 | 14 | 30 | 22 | 23 |
|  | 39 | 13 | 14 | 14 | 22 |  |

* $p<0.05$.

Sources: British General Household Survey 1994 and Finnish Survey on Living Conditions 1994.

Figure 1
Employment participation by gender and age in Britain and Finland (\%)


Sources: British General Household Survey 1994 and Finnish Survey on Living Conditions 1994.
time employment participation is even more clear, since among Finnish women aged 20-49 years 61 percent are employed full-time compared to 42 percent among their British counterparts.

There is additionally a major difference between Britain and Finland in the proportion of women who are full-time housewives. In Britain this proportion is still significant, amounting to over a fifth of women aged 20-49, whereas in Finland the proportion is less than a tenth (Table 1). In Finland, the housewife role is usually only a temporary one during two-three years when mothers have very young children. Although this holds true increasingly for Britain among more educated women, less educated married women with children still tend to spend longer periods of their life in the housewife role compared to their better educated counterparts (Glover and Arber, 1995; Hakim, 1996; Rake, 2000).

The marital status and family type distributions among British and Finnish women are broadly similar. More than half of women aged 2049 live in couples with one or more dependent children (Table 1), and fifth of women in both countries live with a partner without dependent children. In Britain 15 percent of women aged 20-49 are lone mothers, but in Finland this proportion is 9 percent. A small proportion of women are not partnered and live single without children, 11 percent in Britain and 13 percent in Finland.

Women's family and parental status, such as being married or a lone mother, and the number and age of their dependent children influences women's employment opportunities in Britain (Rubery et al., 1997). British lone mothers are less likely to be employed, particularly in full-time employment, than married or cohabiting women and are more likely to be housewives (Table 2).

In Finland differences in employment status between lone mothers and married women are relatively small (Table 2). The proportion of married women with children below 7 years who are employed is 65 percent compared to 52 percent for corresponding lone mothers. In Britain, having small children strongly reduces women's likelihood of being employed, particularly full-time employed, which is the case to a much lesser extent in Finland. In Britain only 9 percent of lone mothers are full-time employed, whereas this proportion for Finnish women is 48 percent. Two thirds of British lone mothers with small children are housewives, whereas the corresponding proportion for Finnish lone mothers is 16 percent. While in Britain 9 percent of lone mothers

Table 2
Employment status of (a) British and (b) Finnish women aged 20-49 by parental status and marital status (\%)

|  | Married/Cohabiting |  |  | Lone mothers |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| (a) Britain | Youngest <br> child <br> below 6 | Youngest <br> child <br> $6-16$ | All | Youngest <br> child <br> below 6 | Youngest <br> child <br> $6-16$ | All |
| Employed | 54 | 77 | 66 | 25 | 51 | 40 |
| Full-time employed | 20 | 32 | 26 | 9 | 26 | 19 |
| Part-time employed | 34 | 45 | 40 | 16 | 25 | 21 |
| Housewives | 43 | 19 | 30 | 66 | 38 | 50 |
| Other non-empl. a | 3 | 4 | 4 | 9 | 11 | 10 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| $N$ | $(1,020)$ | $(1,201)$ | $(2,221)$ | $(256)$ | $(327)$ | $(583)$ |
| (b) Finland | Youngest | Youngest | All | Youngest | Youngest | All |
|  | child | child |  | child | child |  |
| Employed | below 7 | $7-17$ |  | below 7 | $7-17$ |  |
| Full-time employed | 57 | 84 | 74 | 52 | 79 | 68 |
| Part-time employed | 8 | 75 | 66 | 48 | 72 | 62 |
| Housewives | 26 | 9 | 8 | 4 | 7 | 6 |
| Other non-empl. | 9 | 2 | 15 | 16 | 3 | 9 |
| Total | 14 | 11 | 32 | 18 | 23 |  |
| $N$ | 100 | 100 | 100 | 100 | 100 | 100 |

a. Non-employed include unemployed and retired/disabled.

Sources: British General Household Survey 1994 and Finnish Survey on Living Conditions 1994.
with small children state that they are non-employed for other reasons than being a housewife (i.e. unemployed, disabled or early retired), this proportion in Finland is 32 percent. It is likely that eligibility for sickness and unemployment benefits contributes to this difference between the two countries. In Finland lone mothers with small children are much more likely to state that they are non-employed for other reasons than being a housewife than other women.

Currently, there are stronger incentives for women to combine paid work and motherhood in Finland than in Britain. These include publicly organised day care, lengthy periods of maternity leave, leave to
care for sick children, paternity leave and various subsidies for families and children. In a comparison of family policies in OECD countries Finland had a wide range of forms of support to families, whereas Britain was below the average level (Forssén, 1999). Consequently, Finnish lone mothers are nearly as likely to employed as married or cohabiting women. The presence of dependent children among married women or being a lone mother with small children makes little difference to Finnish women's full-time employment participation (Table 2). In contemporary Finnish society combining family and paid employment represents a norm for women, the most common way of life and is regarded as 'normal'. In Britain the younger generation of highly educated women who are married/cohabiting with children have high levels of employment (Rake, 2000). However, being a lone mother reduces markedly British women's employment participation in general, and having small children in particular further reduces their likelihood of being in paid employment.

## 3. Hypotheses and aims

Britain and Finland show contrasting features in relation to women's participation in paid employment, and it is therefore appropriate to examine the patterning of women's health with regard to their different employment status and family role arrangements. From previous work on women's employment patterns and social roles as determinants of health, two competing hypotheses can be drawn which predict health variations according to different combinations of employment, socioeconomic position, material circumstances, marital status and motherhood.

First, the multiple burden hypothesis suggests that having a paid job, particularly a full-time job, and dependent children is likely to lead to health damaging role-strain among women (Gove, 1984). This hypothesis is based on the model of role conflict which results from competing demands and obligations related to multiple roles. As characterised by William Goode (1960) such a conflict can be understood as a 'felt difficulty in fulfilling the role obligations'. Role conflicts enhance role overload and result in subsequent elevated strain and stress levels contributing to poor health. Role overload is thus hypothesised to produce health variations between women belonging to different
combinations of employment and family status groups. Lone mothers form a particular risk group, since they have multiple simultaneous obligations as a breadwinner and as a mother. Non-employed lone mothers in countries with limited levels of welfare benefits run the additional risk of severe material deprivation and poverty. Employed lone mothers run the risk of role conflicts and overload, since they do not have a partner to help support their role as a parent. Thus the multiple burdens due to role overload are modified opportunities to share the burdens, as well as available material resources to help overcome the overload.

Second, the multiple attachment hypothesis, suggests that multiple roles imply multiple attachment to the community which is likely to promote women's health (e.g. Nathanson, 1975; Arber, 1991; 1997; Bartley et al., 1999). Undertaking a paid job outside the home and having children, as well as a partner, act as sources of social support and result in higher self-esteem. Additionally, paid employment provides income and financial independence for women, and these taken together are likely to advance women's health (e.g. Kawachi et al., 1999). Non-employed lone mothers run the risk of financial problems, and they lack the attachment to the community provided by a job. Lone mothers will also lack the additional source of attachment through their partners. Grandparents are important sources of additional support for mothers in caring for children, but single lone mothers are likely to lack this source of support from the paternal grandparents of their children. We expect that multiple attachment to the community through a paid job, children and a partner provides women with emotional as well as instrumental social supports which are likely to advance women's health and buffer against adverse health effects.

This study aims, first, to examine whether, and to what extent, the multiple burden hypothesis and the multiple attachment hypothesis explain health variations among British and Finnish women of childbearing age in the mid-1990s. For this purpose we focus on the analysis of health variations by family type with special reference to women's employment status. We compare the patterning of health among women in these two contrasting countries. A particular interest is devoted to the health and well-being of lone mothers, i.e. women who have dependent children, but live without a partner. Lone mothers form a critical case both in terms of the multiple burden and the multiple attachment hypothesis since those in full-time employment
are likely to be under stronger role strain particularly in Finland and those who are not employed may be less attached to sources of social support particularly in Britain. Additionally, without a partner they have less support to share the burdens of childcare and everyday life than married/cohabiting women. Thus, we can assess whether marriage in these two contrasting countries is a source of support advancing women's health rather than a source of strain damaging married women's health.

The second aim of the study is to assess, whether health variations between women with different role combinations are because of differences in their socioeconomic status and related material circumstances. In particular, we examine to what extent the poorer health of lone mothers can be explained by their disadvantaged position in terms of employment status, education and income. Our expectation is that this will be the case to a greater extent in Britain than in Finland.

## 4. Data and methods

### 4.1. Data

We examine the relevance of the multiple burden and the multiple attachment hypothesis for variations in women's health by using comparable data sets from Britain and Finland, both from 1994. The British data derive from the General Household Survey (GHS), collected by the governmental Office for National Statistics (ONS) (Bennett et al., 1996). This survey is nationally representative and comprised personal interviews with all adults aged 16 or over in private households. The number of respondents was 18,237 and the response rate was 81 percent.

The Finnish data derive from the governmental Survey on Living Conditions (SLC), collected by Statistics Finland (Ahola et al., 1995). This survey is nationally representative and involved personal interviews with people aged 15 or over. The number of respondents was 8,650 and the response rate was 74 percent for women.

Our analyses are restricted to women aged $20-49$, since we are interested in the ways in which women's attachment to paid employment and the family are associated with their health, 5,163 in the GHS and 2,595 in the SLC.

### 4.2. Health indicators

Two common health indicators are used in this study, that is self perceived general health ( PH ) and limiting long-standing illness (LLI). These indicators can be regarded as suitable for an examination of differences in health among women. Both health indicators have been used in previous comparisons of health inequalities between European countries (Lahelma and Arber, 1994; Rahkonen et al., 1995; Cavelaars et al., 1998). Perceived health, particularly, has been recommended for comparative purposes by a recent WHO report (De Bruin et al., 1996). Two parallel health indicators are used which provide some degree of cross-validation to the extent that the two indicators produce comparable results and reduce uncertainty of conclusions derived from the use of only a single health indicator.

Perceived health broadly indicates health related well-being (Manderbacka, 1998a). This indicator has been found to be a strong predictor of subsequent mortality (Idler and Benyamini, 1997; Ferraro and Farmer, 1999). In Finland the respondents were asked whether they assessed their health as 'excellent', 'good', 'average', 'poor' or 'very poor'. In Britain the response alternatives were 'good', 'fairly good' and 'not good'. These perceived health indicators were dichotomised in comparable way to indicate good/excellent versus 'less than good' perceived health. This was done in Finland by combining the categories 'average', 'poor' and 'very poor', and in Britain combining the categories 'fairly good' and 'not good'.

Limiting long-standing illness (LLI) is a widely used health indicator in many countries (e.g. Arber, 1991; Lahelma et al., 1993). It captures a variety of conditions from serious to milder ones, which relate closely to medically confirmed diseases (Blaxter, 1989; Manderbacka, 1999). The questions in the Finnish and British surveys were identical and read: 'Do you have any long-standing illness, disability or infirmity?'. A positive response was followed by a further question asking whether the illness limited the respondent's activities 'in any way' in Britain, whereas in Finland the follow up question asked whether the illness limits 'daily life (gainful employment, housework, schooling, studying)?'. If the answer to the follow up question was positive, the respondent was classified as having a 'limiting long-standing illness'.

The slight differences in the wording of the limiting longstanding illness question and the variation in the categorisation of response al-
ternatives for perceived health in the two countries may affect the absolute levels of health, but is unlikely to affect the patterning of health by marital status, employment status and socioeconomic variables (see Manderbacka, 1998b) which is the main aim of this study.

### 4.3. Sociodemographic indicators

The main focus of this study is on two variables shaping women's health, that is their employment status and family type.

Employment status was categorised into full-time employed women who worked 30 hours or more per week, and part-time employed who worked 29 hours per week or less. Further employment status categories included 'unemployed', 'housewife', 'retired or disabled' and 'other'. The retired/disabled were omitted from the multivariate analyses. The percentage distributions for employment status and other variables included in this study are presented in Table 1.

Family type was categorised into 'couple with children', i.e. women living with a partner (married or cohabiting) and dependent children, i.e. children below 18 years in Finland and below 17 years in Britain; 'divorced lone parents', i.e. previously married women living with dependent children; 'single lone parents', i.e. never married women living with dependent children; 'couple with no children', i.e. women living with a spouse or partner, but without dependent children; and 'single', i.e. women living without a partner. The 'single' category includes never married, divorced and separated women who do not live with a partner or with dependent children. Pre-school age children were further distinguished, i.e. in Britain as children below 6 years and in Finland as below 7 years. However, this distinction was only used in Tables 1 and 2, and not in further analyses due to the small number of cases in the Finnish data.

Other background variables included age, education, and net household disposable income per consumption unit. Education was harmonised according to our previous comparative analyses (see Rahkonen et al., 1995) and categorised into three educational levels, higher, secondary and basic education. In Britain household income was aggregated from each adult in the household giving information during the interview about the respondent's own income from all sources. In Finland income was obtained from the tax registry by using record linkage at the individual level. Income was adjusted for household composition to yield 'net
household disposable income per consumption unit'. This was done by adjusting income by household composition using the following formula: first adult $=1.0$, second adult $=0.7$, child below 18 years $=0.5$ (Uusitalo, 1997).

### 4.4. Statistical analyses

Age adjusted prevalence percentages for the two health measures are presented in Table 1, and were calculated using direct age standardisation with five-year age groups. All women aged 20-49 in each country were used as the standard population. The age adjusted prevalence percentages have to be interpreted with caution, since small numbers of cases in some cells, particularly for categories of family type, may make the results unreliable.

In Tables 3 and 4 multivariate logistic regression analyses are presented. Nested models were fitted using the SPSS statistical package. The results of the modelling are presented as odds ratios (OR), with the reference category receiving the value of 1.00 . Since our aim was to compare differences in health according to women's family status and employment status, Model 1 presents age adjusted odds ratios by family type and Model 2 adjusts for women's employment status. In Model 3 we additionally adjust for educational attainment and household income. The statistical significance of variables in the models were tested by the chi square approximation test. For the odds ratios 95 percent confidence intervals were calculated. Three variable interactions between employment status, family status and country were tested using pooled data from the two countries. However, the interactions were not statistically significant and are not presented here. Accordingly, the British and the Finnish data sets were analysed separately.

## 5. Prevalence of ill-health

Age adjusted prevalence of 'less than good' perceived health and limiting long-standing illness by the social background variables showed broadly similar distributions in Britain and Finland. As expected, women in younger age-groups and with higher household income and education had better health than other women (Table 1).

Employment status was associated with health (Table 1). Employed women reported the best health in both countries, with similar level of health among the full-time and part-time employed. The groups with the worst health were housewives and unemployed women in Britain, and unemployed women in Finland. Finnish housewives had a comparable level of perceived health to employed women, but this was not the case in Britain. The disabled/retired reported very bad health in both countries, which is expected since premature pension in Finland and disability benefits in Britain are usually granted on the basis of chronic illness and reduced functional disability.

Living with a spouse and dependent children was associated in both countries with good health according to both health indicators (Table 1). Lone mothers, whether divorced or single, had the poorest health. In Finland, there were no statistically significant differences in health by family type, but a suggestion that lone mothers and nonpartnered women without children had poorer health.

The number and age of children showed relatively weak associations with women's health, suggesting that women without children or with only one child tended to have poorer health than women with two or more children. In general the differences for perceived health and limiting long-standing illness by family type were greater in Britain than in Finland, in particular British lone mothers showed clearly poorer health than women living in other family types.

## 6. Family type, employment status and health

To examine the patterning of women's perceived health and limiting long-standing illness by family type, and the bearing of women's employment status and other socioeconomic and material circumstances on this patterning, multivariate logistic regression analysis was used for the two countries and the two health indicators.

### 6.1. Perceived health

## Britain

British women living with a partner and dependent children consistently reported better health. When perceived bealth was analysed ad-
justing for age in five year age groups (Table 3a, Model 1) lone mothers had poorer health than married women living with dependent children (the reference category $\mathrm{OR}=1.00$ ). Never married lone mothers were somewhat more likely to report poor health than divorced/separated lone mothers ( $\mathrm{OR}=2.12$ and 1.94 respectively) although this difference was not statistically significant. In contrast to lone mothers, nonpartnered women and married women without dependent children, showed little difference from married women with children.

Adjusting for employment status and education as well as household income (Model 3, Table 3a) the health of women living with a partner without children ( $O R=1.47$ ) and not partnered women ( $\mathrm{OR}=1.27$ ) was poorer than that of married women with children. After adjusting for these structural variables, the health of British lone mothers remained substantially worse ( $O R=1.65-1.79$ ) than that of married mothers, suggesting that lone mothers's poor health is not solely due to their low education and income, and lack of paid employment.

Employment status was associated with perceived health among British women. Part-time employed women ( $\mathrm{OR}=0.82$ ) perceived their health as good slightly more often than full-time employed women ( $\mathrm{OR}=1.00$ ) after adjusting for other socioeconomic variables in Model 3, Table 3a. In Model 2 housewives ( $\mathrm{OR}=1.51$ ) were more likely to report poor health than other women. However, British housewives' poor health depended partly on their socioeconomic status, since after adjusting for education and household income the health difference between housewives $(\mathrm{OR}=1.21)$ and full-time employed women $(O R=1.00)$ was only borderline statistically significant. The odds ratio for unemployed women as well declined after adjustment, and it was little different from that of full-time employed women. This suggests that the health disadvantage of being a housewife and unemployed is related to low household income and lack of educational qualifications.

Education and household income showed expected patterns with perceived health being better for women in higher socioeconomic positions. However, women in the lower 60 percent of the household income distribution reported equally poor health, which was statistically significantly lower than the reference category of those with the highest income.

Table 3
Odds ratios and $95 \%$ confidence intervals (CI) for 'less than good' perceived health, (a) British women, and (b) Finnish women, aged 20-49

|  | Model 1 <br> Age + Family type |  | Model 2 <br> Model 1 + Employment status |  | Model 3 <br> Model $2+$ Education + Income |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (a) Britain $(N=4,818)$ |  |  |  |  |  |  |
| Family type | *** ${ }^{\text {a }}$ | CI | *** | CI | *** | CI |
| Couple with children | 1.00 |  | 1.00 |  | 1.00 |  |
| Couple with no childr. | 1.13 | 0.93-1.36 | 1.23 | 1.01-1.51 | 1.47 | 1.18-1.82 |
| Lone mother divorced | 1.94 | 1.54-2.45 | 1.79 | 1.42-2.27 | 1.65 | 1.29-2.12 |
| Lone mother, single | 2.12 | $1.62-2.77$ | 1.92 | $1.47-2.53$ | 1.79 | 1.35-2.37 |
| Single (no children) | 1.08 | 0.84-1.38 | 1.17 | $0.90-1.52$ | 1.27 | 0.97-1.66 |
| Employment status ${ }^{\text {c }}$ |  |  | *** |  | ** |  |
| Full-time employed |  |  | 1.00 |  | 1.00 |  |
| Part-time employed |  |  | 0.96 | 0.80-1.15 | 0.82 | 0.68-0.99 |
| Unemployed |  |  | 1.33 | 0.96-1.83 | 1.07 | 0.76-1.50 |
| Housewife |  |  | 1.51 | 1.25-1.83 | 1.21 | 0.97-1.50 |
| Education |  |  |  |  | ** |  |
| Higher |  |  |  |  | 1.00 |  |
| Secondary |  |  |  |  | 1.32 | 1.11-1.57 |
| Basic |  |  |  |  | 1.37 | 1.11-1.68 |
| Income |  |  |  |  | *** |  |
| 1. Highest |  |  |  |  | 1.00 |  |
| 2. |  |  |  |  | 1.28 | 1.01-1.62 |
| 3. |  |  |  |  | 1.68 | 1.31-2.15 |
| 4. |  |  |  |  | 1.72 | $1.32-2.24$ |
| 5. Lowest |  |  |  |  | 1.75 | $1.32-2.33$ |
|  | *** ${ }^{\text {b }}$ |  | *** |  | *** |  |
| (b) Finland $(N=2,334)$ |  |  |  |  |  |  |
| Family type |  | CI |  | CI |  | CI |
| Couple with children | 1.00 |  | 1.00 |  | 1.00 |  |
| Couple with no childr. | 0.96 | 0.72-1.28 | 0.95 | 0.71-1.28 | 1.00 | 0.73-1.36 |
| Lone mother divorced | 1.36 | 0.92-2.02 | 1.34 | 0.90-1.98 | 1.24 | 0.83-1.84 |
| Lone mother, single | 1.76 | 0.98-3.17 | 1.68 | 0.93-3.04 | 1.52 | 0.84-2.75 |
| Single (no children) | 1.10 | 0.78-1.54 | 1.10 | 0.78-1.55 | 1.14 | 0.80-1.62 |
| Employment status |  |  |  |  |  |  |
| Full-time employed |  |  | 1.00 |  | 1.00 |  |
| Part-time employed |  |  | 1.11 | 0.76-1.63 | 1.01 | 0.69-1.45 |
| Unemployed |  |  | 1.43 | 1.07-1.91 | 1.23 | 0.91-1.66 |



* $p<0.05,{ }^{* *} p<0.01,{ }^{* * *} p<0.001$.
a. Statistical significance of variables in tables 3 and 4.
b. Statistical significance of nested models in tables 3 and 4 .
c. Retired/disabled/other omitted from analyses in tables 3 and 4.


## Finland

In Finland, the health variations by family type, employment status and socioeconomic status were somewhat smaller than those in Britain. The adjustment for employment status, education and income further narrowed the health differences by family type, but did not alter the basic pattern found when adjusting for age only.

As in Britain, Finnish married women living with dependent children were least likely to have poor perceived health compared to women living in other family types, but unlike in Britain married women without dependent children also reported good health (Table 3 b ). The largest difference from the reference category of married women with dependent children was found for never married lone mothers adjusting for age only in Model 1, Table 3b ( $\mathrm{OR}=1.76$ ) but this just failed to reach statistical significance.

Employment status showed a weak association with perceived health among Finnish women. Only unemployed women ( $\mathrm{OR}=1.43$ ) in Model 2, Table 3a differed statistically significantly from the reference category, and adjusting for income and education removed this difference. Household income was less closely associated with perceived health for Finnish than British women, but low educational attainment was much more strongly associated with poor health among Finnish women.

Table 4
Odds ratios and $95 \%$ confidence intervals (CI) for limiting long-standing illness,
(a) British women, and (b) Finnish women, aged 20-49

|  | Model 1 <br> Age + Family type |  | Model 2 <br> Model 1 + Employment status |  | Model 3 <br> Model $2+$ Education + Income |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (a) Britain $(N=4,818)$ |  |  |  |  |  |  |
| Family type | ** | CI | ** | CI | ** | CI |
| Couple with children | 1.00 |  | 1.00 |  | 1.00 |  |
| Couple with no childr. | 1.26 | 0.97-1.63 | 1.46 | 1.11-1.94 | 1.64 | 1.22-2.21 |
| Lone mother divorced | 1.79 | 1.32-2.43 | 1.58 | 1.16-2.16 | 1.48 | 1.06-2.06 |
| Lone mother, single | 1.55 | 1.05-2.29 | 1.34 | 0.90-1.99 | 1.28 | 0.86-1.93 |
| Single (no children) | 1.09 | 0.76-1.56 | 1.25 | 0.86-1.83 | 1.29 | 0.88-1.89 |
| Employment status |  |  | *** |  | *** |  |
| Full-time employed |  |  | 1.00 |  | 1.00 |  |
| Part-time employed |  |  | 1.02 | 0.78-1.33 | 0.93 | 0.71-1.23 |
| Unemployed |  |  | 1.77 | 1.15-2.71 | 1.54 | 0.98-2.41 |
| Housewife |  |  | 1.90 | 1.46-2.47 | 1.68 | 1.25-2.26 |
| Education |  |  |  |  |  |  |
| Higher |  |  |  |  | 1.00 |  |
| Secondary |  |  |  |  | 1.07 | 0.84-1.36 |
| Basic |  |  |  |  | 1.01 | 0.76-1.34 |
| Income |  |  |  |  | *** |  |
| 1. Highest |  |  |  |  | 1.00 |  |
|  |  |  |  |  | 1.23 | 0.88-1.72 |
| 3. |  |  |  |  | 1.52 | 1.07-2.15 |
| 4. |  |  |  |  | 1.49 | 1.03-2.17 |
| 5. Lowest |  |  |  |  | 1.56 | 1.05-2.31 |
|  | *** |  | *** |  | *** |  |
| (b) Finland $(N=2,334)$ |  |  |  |  |  |  |
| Family type | * | CI | * | CI |  | CI |
| Couple with children | 1.00 |  | 1.00 |  | 1.00 |  |
| Couple with no childr. | 0.83 | 0.62-1.12 | 0.84 | 0.62-1.14 | 0.86 | 0.63-1.17 |
| Lone mother divorced | 1.30 | 0.87-1.93 | 1.27 | 0.85-1.89 | 1.22 | 0.82-1.83 |
| Lone mother, single | 1.93 | 1.11-3.36 | 1.81 | 1.04-3.18 | 1.74 | 0.99-3.06 |
| Single (no children) | 1.18 | 0.85-1.63 | 1.22 | 0.88-1.70 | 1.22 | 0.88-1.71 |
| Employment status |  |  | *** |  | ** |  |
| Full-time employed |  |  | 1.00 |  | 1.00 |  |
| Part-time employed |  |  | 1.28 | 0.88-1.85 | 1.25 | 0.86-1.82 |



### 6.2. Limiting long-standing illness

Britain
The associations between family type and other variables for British women were not as strong for limiting long-standing illness as for perceived health but generally showed similar patterns. Adjusting for age only in Model 1, Table 4a, lone mothers ( $\mathrm{OR}=1.55-1.79$ ) more often reported limiting long-standing illness than single women ( $\mathrm{OR}=1.09$ ) and married women living with dependent children ( $\mathrm{OR}=1.00$ ). Adjusting for employment status in Model 2 narrowed slightly the health gap between the reference category and lone mothers. Adjusting for education and income in Model 3 further caused small changes in the patterning of limiting long-standing illness by family type. The order of the family type categories changed. The reference category of married women with children still reported least limiting long-standing illness, but single lone mothers were no longer statistically significantly different from the reference category. This suggests that limiting long-standing illness among single lone mothers in Britain is primarily associated with their disadvantaged social structural and material position, i.e. low income, lack of educational qualifications and less likelihood of being in paid employment.

Divorced lone mothers ( $\mathrm{OR}=1.48$ ) and unexpectedly also married women without dependent children $(\mathrm{OR}=1.64)$ more often reported limiting long-standing illnesses than single lone parents after
adjusting for employment status, education and household income in Model 3, Table 4a.

Employment status was also associated with limiting long-standing illness among British women and this association was broadly similar to that found for perceived health (see Table 3a). However, the differences between employment status groups were clearer for limiting long-standing illness than for perceived health, with the highest levels of limiting long-standing illness among housewives and unemployed women. Unexpectedly educational attainment showed no association with limiting long-standing illness among British women. For income the association was as expected and was similar to that found for perceived health.

## Finland

Finnish single lone mothers were most likely to report limiting long-standing illness $(\mathrm{OR}=1.93)$ compared with married women with children adjusting for age only in Model 1, Table 4b. Adjusting additionally for employment status, education and household income had little impact on the age adjusted pattern. Single lone mothers ( $\mathrm{OR}=1.74$ ) showed a borderline statistically significant difference from married women with children even after adjusting for structural variables in Model 3, suggesting that Finnish lone mother's poor health was largely unrelated to their employment status, income level and educational attainment. This was different from Britain where after adjustment there was a smaller health difference between lone mothers and married women with children. In Finland married women without children had the best health.

Employment status was associated with limiting long-standing illness, and this association remained after adjusting for education and income for Finnish women. The reference category of full-time employed women ( $\mathrm{OR}=1.00$ ) were least likely to report limiting longstanding illness, whilst unemployed women ( $\mathrm{OR}=1.83-1.77$ ) were more likely to report illness than other women (Models 2 and 3, Table 4b). Unlike in Britain, the health of Finnish housewives (OR $=1.26$ $1.23)$ was equal to that of part-time employed women and neither differed statistically significantly from that of full-time employed women.

## 7. Discussion

We have examined the associations between family type and illhealth among British and Finnish women aged 20-49, while also examining women's employment status and other socioeconomic and material characteristics. This comparative study was based on crosssectional surveys.

A key concern was to examine to what extent differences between countries in family structure and employment participation, as well as related social policies, also differentiate women's health. In Britain being a lone mother and particularly having pre-school children reduces markedly women's employment participation, whereas in Finland this holds true only to a very limited extent.

We found that in Britain, as well as in Finland, women living with partners and dependent children report the best health compared to women in other family types or single women. Among British women perceived health was worst and limiting long-standing illness was most prevalent for lone mothers, irrespective of whether they were divorced or never married. Finnish single lone mothers had the worst health according to both health indicators, reporting somewhat poorer health than divorced lone mothers.

In terms of employment status, women having a paid job had the best health in both countries. In Britain there was a tendency for parttime employed women to have better health than their full-time employed counterparts, whereas there was a tendency for the reverse in Finland. In Finland, housewives' health was close to that of employed women, whereas in Britain housewives reported the worst health on both measures. This may suggest some health selection into the role of housewife in Britain, but not in Finland.

In both countries adjusting for employment status, education and household income weakened the association between lone motherhood and illhealth, but to a somewhat greater extent in Britain than in Finland. Additionally, in Britain the adjustment accentuated the illhealth among married women without dependent children. These findings suggest that in Britain lone mothers live in relatively poor socioeconomic and material circumstances, whereas married women without dependent children live in relatively good conditions. However, in Finland the adjustment for socioeconomic and material variables had little effect on the health of married women without
dependent children, who generally reported the best health. Thus, in Britain more than in Finland the illhealth of lone mothers is because of their disadvantageous socioeconomic and material circumstances. The smaller effect of these circumstances in Finland is likely to be because of women's higher levels of full-time employment. Nevertheless, in both countries there is a residual effect of lone mothers having poorer health. This is likely to be due to lone mothers suffering both from multiple burdens as well as less attachment to the community than other women. Additional residual effects may be partly due to unmeasured socioeconomic circumstances since we lacked comparable occupational social class variable in this study.

Our results are broadly in accordance with the multiple attachment hypothesis, since employed women, and women living with a partner and dependent children had the best health throughout the analysis in Britain and in Finland (apart from the good health of married Finnish women without dependent children). Further indirect support for the multiple attachment hypothesis can be drawn from the poor health of lone mothers in both countries after adjusting for employment status, education and household income. This adjustment reduced the health disadvantage of lone mothers particularly in Britain.

It has previously been argued in favour of the multiple burden hypothesis that women with multiple roles including being a wife, mother and an employee run the risk of role conflict and role overload, which may contribute to elevated stress and strain levels and subsequent poor health (Gove, 1984). However, this was not supported by our findings. On the contrary, multiple roles were associated with good health rather than with poor health. This suggests that, although being a mother and an employee does mean multiple obligations and potential multiple strains, multiple attachment to the community is likely to buffer against health damaging burdens among women.

Lone mothers since the late 1970s have been found to suffer from health disadvantage in Sweden and Britain (Whitehead et al., 2000; Burström et al., 1999). Thus, not only are the socioeconomic and material circumstances among lone mothers poor but also their health is poorer than that of women in other family types, particularly those living with a partner and dependent children. This seems to hold broadly true in a similar way in different European welfare states.

Despite the differences between Britain and Finland in the welfare state, provision of publicly supported childcare and employment status
of lone mothers, in both countries lone mothers report poor health but this is mainly restricted to never married rather than divorced mothers in Finland. In Britain, a greater part of the health disadvantage of lone mothers is explained by their disadvantaged structural characteristics than in Finland. These findings suggest that lone mothers are in particular need of special measures to promote their health. This can be achieved by improving lone mothers' poor living conditions and socioeconomic circumstances. A basic condition for women with dependent children in general is managing their everyday life, which includes access to comprehensive and subsidised child care services. This is true for lone mothers in particular. Furthermore, lone mothers are in need of better educational and employment opportunities, as well as income support, in order to maximise their prospects for good health. Providing women with better employment opportunities is a key measure to reduce health variations, but this needs to be supplemented by day care provision which allows mothers in less advantageous positions and living without a partner to take a paid job.

The Finnish welfare state, which includes large public service sectors, has been very much dependent on women's high employment participation. There is a general normative atmosphere supporting women, irrespective of their parental and family status, to undertake full-time paid jobs. Women's employment, including lone mothers, has been supported by social policies and by providing public childcare. This has contributed to women's economic independence irrespective of their marital or parental status.

Finally, it is important to monitor future trends in the associations between women's health, employment status and family type, since women-friendly policies and welfarestate structures are under increased pressure from international competition and economic downturns. Adverse economic developments and a reversal of women-friendly policies are likely to hit hardest the social position and living conditions, as well as health and well-being, of the most vulnerable groups in society, such as lone mothers.

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# COMBINING A JOB AND CHILDREN: <br> CONTRASTING THE HEALTH OF MARRIED AND DIVORCED WOMEN IN THE NETHERLANDS? 

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#### Abstract

The research question of this paper is whether the combination of paid employment and taking care of children promotes or damages the health of married and divorred women in the Netherlands. To answer this question, data are used from 936 women aged 30 to 54 years who were either living with a partner $(N=431)$ or divorced and living alone $(\mathrm{N}=505)$. The findings show that combining a job outside the home and childcare does not harm women's bealth, irrespective of the length of the working week and the age of the children. In fact, some work-childcare combinations are associated with better health. This is true for both married and divorced women and especially holds true in the case of a part-time job and having older children. Two effects are responsible for the findings: enjoying good bealth enables mothers to work outside the home (selection effect) and working outside the home promotes mothers' bealth (bealth effect).


Keywords: Employment, Cbildcare, Women, Divorce, Health, The Netherlands.

[^18]
#### Abstract

Résumé Cette communication soulève la question de savoir si la combinaison d'un emploi rémunéré avec la responsabilité d'une famille est bénéfique ou néfaste pour la santé des femmes mariées et des divorcées aux Pays-Bas. Pour y répondre, l'auteur utilise des données recueillies auprè̀s de 936 femmes âgées de 30 à 54 ans, vivant en couple (431) ou divorcées et vivant seules (505). Les résultats de l'étude montrent que la combinaison d'un emploi à l'extérieur du foyer avec les responsabilités familiales ne porte pas préjudice à la santé des femmes, quels que soient la durée hebdomadaire du travail et l'age des enfants. Certaines combinaisons travail-famille sont même associées à une amélioration de la santé. C'est le cas pour les femmes mariées et les divorcées, tout particulièrement quand elles travaillent à temps partiel et ont de grands enfants. Ce résultat est le produit de deux effets : être en bonne santé permet aux mères de famille de travailler à l'extérieur (effet de sélection), et travailler au dehors est bénéfique pour leur santé (effet sur la santé).


Mots-clés : Emploi, Education des enfants, Femme, Divorce, Santé, Pays-Bas.

## 1. Introduction

In the Netherlands, female labour force participation has increased substantially in recent decades. Whereas no more than a quarter ( $26 \%$ ) of all women aged 15 to 65 worked outside the home in 1960, this proportion had climbed to over a third ( $37 \%$ ) in 1989 and to more than a half ( $51 \%$ ) in 1999 (NCBS, 1960, 1989, 1999). The increase in female labour force participation may be attributed almost entirely to changes within the group of married women (Pott-Buter et al., 1998). Whereas in the past it was not customary - or in some cases even forbidden ${ }^{1}$ - for married women to have a paid job, a substantial proportion of married women now remain active in the labour market. The

[^19]percentage of married women with a paid job rose from $7^{2}$ in 1960 to 31 in 1989 and to 45 in 1998 (NCBS, 1960, 1989, 1998a). Note, however, that most of these jobs are part-time. A majority of women decide to work fewer hours following the birth of their first child (Van der Lippe, 1993; Van der Vinne, 1998).

Successive time budget surveys have shown that this strong increase in paid employment among married women has not led to a substantial redivision of unpaid work between men and women (Van den Broek et al., 1999; Van der Lippe, 1997). Household and family responsibilities are still largely the domain of women. In 1995, women spent an average of 21.9 hours a week on housework and 3.7 hours on caring for children and other household members (total 25.6 hours); in 1975 this figure was 28.6 hours ( 25.5 hours housework and 3.1 hours caring duties). Men, on the other hand, spent an average of 2.9 hours more per week on household and family responsibilities in 1995 than in 1975: an increase from 8.2 to 11.1 hours a week. Men, moreover, tend to spend these hours on the less tedious aspects of housework and childcare (Knijn, 1992; Van der Lippe, 1993, 1997). These days, for example, they are more inclined to wash the dishes, vacuum the house and put the children to bed, but tasks such as cleaning the kitchen floor, the windows or the lavatories, ironing and changing nappies are primarily left to their wives. So, for married women in general and mothers in particular working outside the home generally means having to take on an additional role: women still tend to assume prime responsibility for homemaking duties, alongside their paid jobs.

Divorce does not improve women's circumstances but leads to undertaking increased household and childcare responsibilities. Divorced women are almost always granted custody over their children. Co-parenthood is still very uncommon in the Netherlands (Kalmijn and De Graaf, 1999). Even today, the most common parental access arrangement is that the children stay with their fathers every other weekend and that public holidays and school holidays are divided amongst both parents. This means that as a rule, responsibility for day-

[^20]to-day childcare is assumed by divorced women, and that they must inevitably combine these duties with paid employment.

It has been said that combining work and children could damage women's health. Having to divide one's attention and time between 'babies and briefcases' could, for example, lead to a conflict of roles and put a strain on women, which in turn could result in fatigue, stress and, eventually, in illness (Van Poppel, 1996). Balancing work and children could, conversely, improve women's health since working outside the home could make a welcome change from the less pleasant activities and situations at home, and vice versa. In this article, we shall examine the effects of combining a job and childcare on the health of married and divorced women aged 30 to 54 years. The central research question is: Does combining work and children promote or damage the health of married and divorced women?

## 2. Past research

The study of the relationship between women's various roles and their state of health is not new (Dutch studies: Bekker, 1995; Guérin et al., 1997; Groenendijk, 1998; Van Reekum, 1988; Veerman and Verheijen, 1984. Non-Dutch studies: for a review, see Baruch et al., 1987; Menaghan and Parcel, 1990; Repetti et al., 1989; Waldron et al., 1998). ${ }^{3}$ The main focus in earlier work was women's roles as employees and mothers. ${ }^{4}$ Studies arrived at the almost unanimous conclusion that combining a job outside the home and childcare seems to promote women's health rather than to have a harmful effect on their health. However, in most cases this conclusion is drawn because there appears to be a positive correlation between health status and the two individual roles. In other words, both paid employment and having children

[^21]are individually and positively related to women's state of health. ${ }^{5}$ As a result, working mothers tend to be in better health than housewives. Only a few Non-Dutch studies also found a relationship, either positive or negative, between health status and the combination of employment and motherhood (e.g., Nathanson, 1980; Waldron and Jacobs, 1989).

These findings are often explained by the role accumulation hypothesis, namely that each individual role encompasses specific elements that promote people's health. For example, a job outside the home offers social contacts, professional challenges, a sense of responsibility, selfrespect and self-worth as well as an income of one's own and less financial dependence on one's (ex-)partner or the state. Childcare, on the other hand, offers intimacy and affection, responsibility for dependents and an opportunity to be of importance to others. People who combine both these roles are able to develop their talents to the full, which is an enriching experience and makes it less likely that they will feel stuck in a rut. Apparently, this welcome variety in one's life outweighs the time and energy one needs to invest in these roles.

Despite the overwhelming consensus between these studies, the findings should be interpreted with due care. Almost all the studies measured women's health at one point in time; possible differences in health status between the groups of women distinguished prior to the time of the survey were not taken into account. As a result, the direction of cause and effect remains open. Paid employment and childcare can be a source of good health. However, it may be a matter of selfselection in the sense that balancing work and children is only an option for women who are in good health in the first place. Even though none of the researchers exclude the possibility that selection effects may have affected their research findings, they still draw the conclusion that a job and motherhood promote women's health.

A positive relationship between having children and health may be partially the result of self-selection. Women who have health problems will be less inclined or may be less able to have children. Two argu-

[^22]ments can be put forward in support of the view that self-selection also affects women's labour force participation. First, employers are placing ever-greater demands on the health status of their employees and the selection of employees on the basis of their health is therefore becoming stricter. As a result, people who (continue to) have a job, tend to be in good health. This is the so-called 'healthy worker effect' (Marcus and Siegel, 1982; Nathanson, 1980). A second argument is that the notion persists that it is the duty of men to earn an income for their families. Men with health problems are therefore less likely to stop working of their own accord. For women, on the other hand, having a paid job is still often seen as a personal, voluntary choice. As a result, women in general and mothers in particular are encouraged to withdraw from the labour force, and the decision to devote oneself entirely to housework and childcare is widely respected in the Netherlands. Many women therefore tend to combine a paid job and family responsibilities only if it does not constitute too much of a burden, that is to say, if they are physically and mentally able to cope with 'working a double day'. Given the above, we shall pay explicit attention to possible selection effects when answering our central research question. In the analysis we shall adjust for any health problems that were suffered or contracted in the past.

A second drawback of the studies that have been conducted so far is the simplistic distinction that researchers tend to make between women with and without a paid job and between women with and without children living in the parental home. The health effects of being in paid employment may be related to the level of job and the length of the working week. The above-mentioned positive elements of working outside the home apply primarily to high-level, more 'extensive' jobs; whereas low-level, part-time work tends to be tedious and heavy with limited career prospects and opportunities for personal development. As for childcare, it is expected that the health implications will be related to the age of the children. The younger the children, the more care they need.

Differentiating between type of job and age of the children is particularly relevant when women combine paid employment with childcare. In the Netherlands, most women still give priority to the family. Compared to most other European countries, Dutch women are less inclined to put out a great part of the childcare to someone outside of the household. As a result, their situation on the labour market is usu-
ally adapted to the situation at home (Visser, 1999). This is particularly clear immediately after the birth of a child, when an overwhelming majority of women exchange their full-time job for a part-time job (NCBS, 1998b). Under these circumstances, balancing work and children will generally be felt as a welcome relief rather than a heavy burden. Having a full-time - or almost full-time - job in combination with young children may, on the other hand, have a detrimental effect on women's health. However, this relatively small group of women has largely been overlooked in studies that merely distinguish between whether or not women have a paid job and children living at home. In order to determine the extent to which the burden of (combining) a job and children affects women's health, this study will explicitly address the length of the working week and the age of the children.

A final drawback of existing research regards the specific group of women studied. Most studies that examine the health effects of juggling the responsibilities of motherhood and employment tend to study married women only. However, paid employment and family roles often have different implications for divorced women. On the whole, divorced women are more likely to work out of financial necessity and they receive no assistance from a partner in the performance of their homemaking duties. As a result, it is quite likely that the health implications of combining a job and children differ for divorced women and for married women. Therefore, it is important to separately analyse these two groups of women.

## 3. Source of data and measuring instruments

The data used have been taken from the research programme Scheiding in Nederland (Divorce in the Netherlands, SIN). For the purpose of this programme, interviews were held with 2,346 people aged 30 to 75 years in the second half of 1998. The respondents constituted a stratified sample, subsumed under one of the following three categories: (a) first-married, (b) divorced persons who are not remarried, and (c) divorced persons who are remarried. The divorces, in which the two latter groups were involved, do not necessarily refer to first marriages. The sample was drawn from the population registers of nineteen municipalities of varying sizes from all parts of the Netherlands. For more details on the survey, see Kalmijn et al. (2000).

Besides the number of marriages, information is gathered on the number of times respondents had cohabited three years or longer in the past and whether or not they live together with a partner at the time of interview. On the basis of this information, the respondents are regrouped into one of the following two categories: (1) married and unmarried cohabiting couples, for the first time or more, and (2) ever divorced (once or several times) living alone.

Since we are interested in the health implications of labour force participation and childcare, this article will deal exclusively with women aged 30 to 54. In the sample, data about all the relevant variables were available for 936 women. Given the possible substantial differences between women currently living with a partner (group 1, $N=431$ ) and previously partnered women currently living alone (group $2, N=505$ ), separate analyses were carried out for these two categories. We shall not take into consideration the number of times these women were married or lived in a consensual union, nor shall we make a distinction between marriage and extra-marital cohabitation when addressing existing or past relationships. For the sake of simplicity, we shall speak of married women when referring to women who currently have a partner and of divorced women when referring to women who currently do not have a partner.

In the SIN survey, respondents were asked to assess their state of health, the dependent variable in this paper. The question was formulated as follows: "How would you rate your general state of health?" The answer categories were: (1) bad, (2) not too good, (3) reasonable (4) good, and (5) very good. Although there are several drawbacks to this subjective health indicator, it appears to be an accurate predictor of mortality and it correlates strongly with various objective health measures (Deeg, 1998; Idler and Benyamini, 1997).

The two following dichotomous variables were included with regard to women's paid employment and family responsibilities: the variable work, indicating whether the woman concerned had a paid job, and the variable children, indicating whether the woman in question had one or more children. These two variables were further subdivided. The category of working women was decomposed by the average number of hours a week in paid employment. Four categories were distinguished: (1) 1-11 hours; (2) 12-23 hours; (3) 24-35 hours; and (4) 36 hours or more. Since the number of hours women work outside the home correlates highly with their job level, this latter factor has not
been included in the analyses. The variable children was broken down on the basis of the age of the youngest child. The following four categories were distinguished: (1) 0-4 years; (2) 5-12 years; (3) 13-18 years; and (4) 19 years or older. This classification is based on the assumption that caring duties diminish as children grow older. The last category consists mainly of women whose children have already left the parental home.

As mentioned, we are interested in the effects of paid employment and childcare on women's health. Since women's state of health can, in turn, affect their decisions to participate in the labour market or to have children, the analyses will adjust for past differences in state of health between the groups of women. In order to measure the existence of past health problems, the SIN survey asked respondents whether they suffered from chronic physical diseases or disabilities that impair their activities of daily living. ${ }^{6}$ Their answers ( $0=$ no; $1=$ yes) resulted in the dichotomous variable cbronic disease/disability. The respondents were also asked whether they had ever received treatment from a medical consultant for a period of three months or more, resulting in the creation of the dichotomous variable prolonged medical treatment with a value of 1 for women who had undergone such treatment and a value of 0 for those who had not.

The analyses were also adjusted for differences by the woman's age ( $30-54$ years) and by her educational level. This adjustment is necessary because both the state of health itself and the health determinants may be correlated with these two variables. Numerous studies, for example, have shown that people's health deteriorates as they grow older and that the more highly educated are in better health than people with a low level of education (Fengler et al., 1997; De Klerk and Hessing-Wagner, 1999; Pot and Deeg, 1997). In addition, highly educated women tend to be more active in the labour market, whereas lesser-educated and younger women are more likely to be housewives (Latten and Cuijvers, 1994; Liefbroer and Dykstra, 2000). The level of education was measured with the aid of two questions. Respondents were first asked their highest level of education when they left full-time education. They were then asked whether they had continued their

[^23]education later in life, and if so which level of education they had ultimately attained. Seven categories were distinguished for both questions, ranging from 'primary education or lower' to 'university education'. Where the level ultimately attained was higher than the level achieved in full-time education, the highest level attained was decisive.

Table 1 presents descriptive information on each of the independent variables. At first glance, the employment status of married women is the most striking. The percentage of married women in paid employment ( $64 \%$ ) is much higher than the national average ( $45 \%$ ), as mentioned in the introductory section. Aside from the differences in the age group considered - 30 to 55 compared with 15 to 65 - one must realise that paid jobs of less than twelve hours a week are not included in the national statistics. In our sample, more than $7 \%$ of the married women works less than twelve hours a week. Furthermore, Table 1 shows that the differences in characteristics between married and previously married women are in accordance with the research results regarding women's likelihood of divorce. Compared to their married counterparts, divorced women are more highly educated, more often childless, and less likely to have very young children. It is interesting that the health status of women does not seem to play a key role in the likelihood of divorce. A more or less similar percentage of past health problems are found among both married and divorced women.

## 4. Results

### 4.1. Work and health

In the upper part of Table 2, columns 1 and 3 show the average state of health (range: 1 (bad) - 5 (very good)) of married and divorced women, respectively, in relation to the average number of hours worked outside the home per week and adjusted for differences in age and level of education. There were clear differences in state of health between working and non-working women: women in paid employment tend to be in better health than full-time housewives ( $F=49.16$, $p<0.001$ ). Although this applies to both married and divorced women, health differences between working and non-working women

Table 1
Percentage distribution of independent variables (column percentages)

| Variables | Total <br> $(N=936)$ | Married <br> $(N=431)$ | Divorced <br> $(N=505)$ |
| :--- | :---: | :---: | :---: |
| Married (\% yes) | 46.0 | 100.0 | 0.0 |
| Employed (\% yes) |  |  |  |
| No job | 32.8 | 36.2 | 29.9 |
| Working 1-11 hours | 18.1 | 7.4 | 5.0 |
| Working 12-23 hours | 20.3 | 16.9 | 15.0 |
| Working 24-35 hours | 22.8 | 17.9 | 23.2 |
| $\quad$ Working 36 hours or more |  |  |  |
| Children | 15.3 | 10.2 | 19.6 |
| Never had children | 10.1 | 16.3 | 4.8 |
| Youngest child 0-4 | 24.5 | 30.9 | 19.1 |
| Youngest child 5-12 | 20.6 | 17.7 | 23.1 |
| Youngest child 13-18 | 29.5 | 24.9 | 33.4 |
| Youngest child 19+ | 24.5 | 23.2 | 25.5 |
| Chronic disease or physical disability (\% yes) | 35.1 | 36.0 | 34.5 |
| Prolonged medical treatment in past (\% yes) |  |  |  |
| Age | 9.2 | 11.1 | 7.5 |
| 30-34 years | 19.8 | 22.3 | 17.6 |
| 35-39 years | 26.0 | 28.8 | 23.8 |
| 40-44 years | 24.5 | 20.2 | 28.1 |
| 45-49 years | 20.5 | 17.6 | 23.0 |
| 50-54 years |  |  |  |
| Level of education attained | 4.2 | 3.0 | 5.1 |
| Primary education or less | 16.5 | 17.4 | 15.6 |
| Lower vocational training | 14.3 | 15.3 | 13.5 |
| Secondary education | 26.5 | 24.6 |  |
| Intermediate vocational training | 9.7 | 7.7 | 11.5 |
| Higher education | 21.0 | 21.8 | 20.4 |
| Advanced vocational training | 8.9 | 8.4 | 9.3 |
| University education |  |  |  |

Source: SIN '98.
are much greater within the group of divorced women (married: $F=$ 14.84, $p<0.001$; divorced: $F=39.97, p<0.001$ ). Within the group of working women, on the other hand, there appeared to be no significant differences in state of health. This means that the average number of hours worked per week is not related to good or poor health. Differ-
ences in state of health between married and divorced women are greatest among those who do not have a job outside the home and among those who work more than 36 hours a week. In both cases divorced women are in poorer health (no job: $F=7.20, p<0.01 ; 36$ hours or more: $F=3.26, p<0.10$ ).

Table 2
Average state of health (range: 1-5) among married and divorced women in the $30-54$ year age group, by employment and motherhood status, adjusted for differences in age and education and health differences in the past

|  | Married ( $N=431$ ) |  | Divorced ( $N=505$ ) |  |
| :--- | :---: | :---: | :---: | :---: |
|  | adj. for <br> age and <br> educa- <br> tion <br> $(1)$ | adj. for age, <br> education <br> and previous <br> health <br> problems (2) | adj. for <br> age and <br> educa- <br> tion <br> $(3)$ | adj. for age, <br> education <br> and previous <br> health <br> problems (4) |
| Employment status | 3.98 | 3.93 | 3.90 | 3.83 |
| Having a job | 3.85 | 3.87 | 3.92 | 3.98 |
| Working 1-11 hours | 4.01 | 3.97 | 3.93 | 3.90 |
| Working 12-23 hours | 3.95 | 3.90 | 3.96 | 3.85 |
| Working 24-35 hours | 3.92 | 3.81 | 3.73 |  |
| Working 36 hours or more | 4.00 | 3.92 | 3.34 | 3.50 |
| No job | 3.65 | 3.74 |  |  |
| Motherhood status |  | 3.87 | 3.75 | 3.74 |
| Having children | 3.88 | 3.87 | 3.70 | 3.73 |
| Youngest child 0-4 | 3.87 | 3.89 | 3.81 | 3.79 |
| Youngest child 5-12 | 3.95 | 3.89 | 3.84 |  |
| Youngest child 13-18 | 3.87 | 3.83 | 3.80 | 3.74 |
| Youngest child 19+ | 3.88 | 3.89 | 3.76 | 3.74 |
| Never bad cbildren | 3.58 | 3.70 | 3.65 | 3.68 |

Source: SIN '98.

Two explanations can be put forward for the health differences between working and non-working women. One can either argue that working outside the home promotes women's health (the health effect) or that enjoying good health enables women to have a job outside the home (self-selection). Comparing columns 1 and 3 with columns 2 and

4, respectively, shows that both explanations are likely to be valid. In columns 2 and 4 the relationship between having a paid job and one's state of health is adjusted for the two measures of health differences in the past. It appears that health differences between working and nonworking women are much smaller after adjustment has taken place. On average, women who have suffered chronic diseases/disabilities and/or prolonged medical treatment in the past are less likely to have a paid job, or else they have a 'small' part-time job of less than 12 hours a week. More 'extensive' jobs, on the other hand, tend to be performed by women who have not had health problems in the past. However, health differences between working and non-working women remain significant (married: $F=8.12, p<0.01$; divorced: $F=17.45, p<$ 0.001 ). In other words, apart from the fact that healthy women are better able to participate in the labour force, having a job also appears to promote women's health.

### 4.2. Children and health

In the lower part of Table 2, columns 1 and 3 show that on average women with children are in better health than women without children ( $F=6.01, p<0.05$ ). However, this correlation is only significant in the case of married women (married: $F=6.04, p<0.05$; divorced: $F=1.07, p=0.302$ ). When these figures are adjusted for health problems in the past (see columns 2 and 4 ), we see that the differences in health status may be partially attributed to selection effects: women without past health problems are more likely to decide to have children. However, there still appear to be differences in health between married mothers and childless married women ( $F=2.87, p<$ 0.10). In other words, apart from the fact that women's state of health appears to be one of the factors determining whether or not they have children, caring for children appears to have a beneficial effect on the health of married women. Furthermore, caring for young children does not seem to put a heavier strain on women's health than caring for older children. The health status of mothers is barely affected by the age of the youngest child. Finally, the greatest health differences between married and divorced women are found within the group of mothers with the oldest or the youngest children, with divorced women in poorer health. These differences are not significant, however.

### 4.3. Combining work and children and health status

We have seen above that having a paid job appears to promote the health of both married and divorced women, regardless of the average number of hours worked per week. However, whether or not these working women also take care of (young) children was not taken into consideration. The positive effect of labour force participation on women's health could therefore be related to the fact that in most cases their employment circumstances are compatible with the situation at home. This could mean that most women who work outside the home are either childless or have older children, whereas most mothers with young children have (temporarily) given up their jobs, or have a part-time job that can be easily combined with their caring duties. In the latter case, a job may be a welcome change from the lives these women lead - and thus beneficial to their health - rather than a heavy additional burden. In order to determine whether this is actually the case, we have examined health differences between women based on the pressures of balancing 'babies and briefcases'. Figures 1 and 2 present the average state of health of married women in relation to both their employment and family situation, controlling for age and educational differences (Figure 1) and previous health status (Figure 2). Figures 3 and 4 show similar results for divorced women.

What is immediately apparent from Figures 1 and 3 is that the positive relationship between paid employment and health is manifested primarily among married and divorced mothers with children aged five and over. Health differences between working and nonworking mothers are most marked when the children are over eighteen ( $F=51.55, p<0.001$ ), followed by mothers whose youngest child is aged thirteen to eighteen ( $F=13.74, p<0.001$ ). The smallest, yet significant health differences are found among mothers whose youngest child is aged five to twelve ( $F=4.07, p<0.05$ ). Comparing Figures 1 and 3 with Figures 2 and 4, respectively, shows that these health differences may be attributed in part to health selection: in order to be able to combine a job with caring for children, women need to enjoy good health. After adjustment for this fact, the health differences found between working and non-working mothers with a youngest child aged five to twelve years is no longer significant. However, if the youngest child is older than twelve, health differences persist (age youngest child nineteen years or older: $F=22.20, p<0.001$; age youngest child 13-18

Figure 1
Health differences among married women in the 30 to 54 year age group, by family and job situation, adjusted for differences in age and education


Figure 2
Health differences among married women in the 30 to 54 year age group, by family and job situation, adjusted for differences in age and education and health differences in the past


Figure 3
Health differences among divorced women in the 30 to 54 year age group, by family and job situation, adjusted for differences in age and education


Figure 4
Health differences among divorced women in the 30 to 54 year age group, by family and job situation, adjusted for differences in age and education and health differences in the past

years: $F=11.33, p<0.01$ ). So, combining a job with caring for children older than four is not detrimental to the health of married and divorced women. In fact, balancing these responsibilities appears to promote health once the children have left primary school. Upon closer examination, we see that the work-childcare combination promotes health most strongly among women with a part-time job of less than 24 hours a week. These jobs appear to be most compatible with homemaking duties. The only exception is found among married women with adult children, most of whom live outside the home. The positive effect on the health of these women is strongest for those in paid employment for an average of 24 or more hours per week. It is likely that children in this age group require so little care that these responsibilities do not conflict with a longer working week.

The situation is different for mothers with one or more children under five. Health differences between married working and nonworking mothers are not significant with young children. In this group, the average state of health of women in paid employment is only fractionally higher (Figure 1), and after adjustment for health problems in the past fractionally lower (Figure 2) than that of women without a job. This suggests that the advantages of working outside the home are 'disrupted' by the pressures of having to combine a job with childcare. However, substantial health differences do exist among divorced mothers with young children. On average, divorced mothers of preschool children with a part-time job of less than 24 hours a week are in better health than divorced women who do not combine childcare and a paid job (Figure 3), the more so after these figures are adjusted for health problems in the past (Figure 4). Differences in health status are not found between full-time housewives and divorced mothers of preschool children with a job of at least 24 hours a week. However, if health problems in the past are taken into account, the average previous state of health of the latter turns out to be better. In other words, divorced young mothers who succeed in combining childcare with a long working week tend to be physically robust.

A final noteworthy finding was that labour force participation was not associated with the health of married and divorced women without children. Among married childless women, this is also the case prior to adjustment for health problems in the past. Although paid employment appears to have a positive effect on the health of divorced women without children - working women in general, and those with a long
working week in particular, tend to enjoy better health - this effect disappears following adjustment for health problems in the past. Those who are in good health tend to work on average 24 or more hours a week.

## 5. Summary and discussion

This article clearly shows that having a job and children is positively correlated to women's health in the Netherlands. Women in paid employment enjoy better health than full-time housewives, and mothers are healthier than women without children. At first glance, this finding does not come as a surprise. After all, numerous earlier studies have arrived at the same conclusions. However, our research is significant in that it differs substantially from past studies on a number of points.

The first difference is that our analysis has adjusted for health problems suffered in the past. This sheds light on the question of causality: Does having a job and caring for children have a beneficial effect on women's health (the health effect), or conversely, does good health enable women to combine childcare with a job (selection effect)? Although most previous studies have used cross-sectional data without adjusting for past health differences between the groups of women distinguished, they tend to attribute the positive correlations found entirely to health effects. Our research has called these conclusions into question. It has found that the positive relationships between paid employment and health as well as between having children and health are partly the result of self-selection: a higher proportion of women who participate in the labour force and who have ever had children have not had health problems in the past.

A second important difference is that, whereas past studies tended to focus on married women only, our study also included divorced women. When these two groups of women are compared, we see first and foremost that caring for children appears to have a beneficial effect on the health of married women in particular. There were no significant health differences between single divorced women with and without children. The positive effect of childcare on health may be 'disturbed' for divorced mothers because they are unable to share caring duties with a partner. The positive health effect of labour force
participation, on the other hand, is stronger among divorced women. Divorced women appear to derive more benefit from the positive aspects of having a job. These advantages include forging social contacts and earning an income. For divorced women, unlike married women, these kinds of advantages are more difficult to achieve if they do not have a paid job. To strengthen this argument, further analyses are needed in which social networks and material circumstances are included as possible intervening variables between paid employment and health outcomes (Arber, 1997).

A third difference between our study and previous research is that the current study has examined the degree to which the health effects of working and caring differ, depending on the length of the working week and on the age of the children. We found that these effects hardly differ when they are examined separately. Women's health is promoted quite simply either because they are active in the labour market (married and divorced women) or because they take care of their children (married women). This is not the case when childcare is combined with a job. Once the children of both married and divorced women have reached the age of five, the job-child combination is highly correlated with good health, irrespective of the number of hours worked per week. However, for mothers of children aged 5 to 12 , this positive correlation seems largely to be the result of self-selection: healthy women are most likely to combine childcare with a full-time or part-time job; the combination hardly promotes the health of women in this category. Finally, the health of mothers with one or more children under the age of five is neither negatively nor positively affected by paid employment if they are married. For those who are divorced, combining childcare with a part-time job (less than 24 hours per week) appears to be most conducive to good health.

This latter finding is particularly interesting in light of the recent debates regarding plans of the Dutch government to oblige single mothers on social security with preschool age children to enter the labour force. Since 1996, single mothers on social security with children over four years have been required by Dutch law to enter the labour market; single mothers with one or more children under the age of five have so far not been required to find a job (Jehoel-Gijsbers, 1998). However, last year the Dutch government announced plans obliging them to participate in the labour force for a minimum of 20 to 24 hours a week. Opponents of the bill argue that this job-child com-
bination will have a detrimental effect on the health of these women. They point out that caring for young children, combined with paid employment, will put too much of a strain on most divorced women. The findings of our study do not support this argument. A paid job even appears to have a beneficial effect on the health of young, divorced mothers, as long as their working week is short (less than 24 hours a week). Taking care of very young children combined with an 'extensive' job, on the other hand, does not improve the health of divorced women. This combination is mainly found among those women who had on average the fewest health problems at an earlier stage of their life. Finally, the current study has only examined possible direct effects of labour force participation, childcare and a combination of the two on women's health. Combining work and children may well take a heavy toll on women, the harmful health effects of which may not manifest themselves until a later date. We propose that future research address this issue.

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# VIOLENCES ENVERS LES FEMMES ET EFFETS SUR LA SANTE. PRESENTATION DE L'ENQUETE NATIONALE SUR LES VIOLENCES ENVERS LES FEMMES EN FRANCE (ENVEFF) 

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## Résumé

Ce n'est que récemment que les revues médicales soulignent l'importance de la violence envers les femmes et s'efforeent d'en mesurer les conséquences en termes de santé pour la population féminine. En France, peu de travaux quantitatifs ont été réalisés sur les violences envers les femmes et aucune estimation de la fréquence de ces violences n'a pu être calculée au niveau national, mais des enquêtes nationales effectuées dans d'autres pays ont montré l'ampleur de ce phénomène.

[^24]
#### Abstract

A l'beure actuelle, les statistiques francaises disponibles portent sur les seules violences déclarées à la suite d'une démarche des femmes vers une institution. Cbaque administration ou structure sociale d'aide aux victimes compile les statistiques de son activité, mais l'ensemble du phénomène reste méconnu. C'est pourquoi une équipe pluridisciplinaire est en train de réaliser, à la demande du Service des Droits des Femmes, une enquête nationale quantitative sur les violences envers les femmes auprès d'un échantillon aléatoire de 7000 femmes résidant en France métropolitaine. La collecte des données est prévue pour le début de l'année 2000, elle se fera par teeléphone selon la méthode Cati. Aprè̀s un bref aperçu de l'état de la question dans le contexte international, cette communication décrit comment les effets des violences sur la santé des femmes seront étudiés dans cette enquête.


Mots-clés : France, Violence contre les femmes, Santé des femmes, Enquête.


#### Abstract

Only recently has the medical literature begun to focus on the extent and measurable bealth impacts of violence against women. There has been little quantitative study of violence against women in France, and while the nationwide incidence cannot be estimated, national investigations in other countries bave brought to light the extent of the problem.

Current statistical evidence in France is based only on violence reported by women to an official agency. All government and victim support agencies compile figures on their activities, but the problem is still poorly understood as a whole. This led the Women's Rights Department to commission a multidisciplinary national quantitative survey of violence against women, now under way, in a random sample of 7,000 women living in mainland France. Data will be collected by telephone interviews using the CATI (Computer Assisted Telephone Interviewing) method in early 2000. Following a short review of the international background, this paper focuses more particularly on how the impacts of violence on women's health will be studied in this survey.


Keywords: France, Violence against women, Women's health, Survey.

## 1. Introduction

Une enquête nationale quantitative sur les violences envers les femmes en France est réalisée à la demande du Service des Droits des Femmes. La collecte des données de l'enquête métropolitaine se déroule au premier semestre 2000 auprès d'un échantillon aléatoire de 7000 femmes âgées de 20 à 59 ans. Des opérations similaires sont prévues dans les DOM (départements d'Outre-mer) en 2001. Après avoir établi un bilan des travaux actuellement disponibles sur les liens entre les violences et l'état de santé des femmes. Ce texte présente les objectifs et la méthode de l'enquête et s'attache plus particulièrement à décrire comment les effets des violences sur la santé des femmes y sont étudiés.

Il semble évident que les situations de violence s'inscrivent parmi les déterminants sociaux de la santé, toutefois, il convient de définir ce que l'on entend par «situation de violence ». C’est pourquoi nous développons, en préalable, notre cadre de réflexion autour de la définition des violences envers les femmes.

En effet, on constate qu'actuellement la violence est un thème récurrent qui traverse les débats de société. Violence sociale engendrée par l'accroissement des inégalités et la marginalisation, voire l'exclusion d'une part importante de la population : violences urbaines, violence des jeunes, délinquance... ; violence institutionnelle : violence en prison, violence dans des maisons pour personnes âgées, violence à l'école, violence au travail (Dejours, 1998), « mobbing » (Leymann, 1996) ; violence de l'État, violence politique: guerres, attentats, autres actes de terrorisme, racisme... Ce sont souvent les aspects les plus spectaculaires de la violence qui sont largement repris et véhiculés, notamment par les médias, ce qui ressortit à la violence au quotidien est beaucoup plus occulté. L'approche des violences envers les femmes s'inscrit généralement dans le registre des violences interpersonnelles et, par là même, se rattache la plupart du temps à ce qui relève de la deuxième catégorie des situations « ordinaires» liées à la vie quotidienne, voire à la sphère du privé.

## 2. Cadre conceptuel : les violences envers les femmes, vers la reconnaissance d'un fait social ?

Quelle qu'en soit la nature et quels qu'en soient les protagonistes, les actes violents sont toujours une atteinte à l'intégrité de la personne, même dans certains cas où il s'agit simplement d'atteintes aux biens de la personne.

Au-delà des actes, la violence s'inscrit dans un fonctionnement d'emprise sur l'autre. Elle est fondée sur un rapport de force ou de domination qui s'exerce par les brutalités physiques ou mentales - le concept de harcèlement moral (Hirigoyen, 1998) est un des aspects de la violence psychologique - entre au moins deux personnes. Elle découle du désir d'imposer sa volonté à l'autre, de le dominer, au besoin en l'humiliant, en le dévalorisant, en le harcelant jusqu'à sa capitulation et sa soumission. Selon une définition des Nations Unies (extraite du document produit par le Groupe de spécialistes pour la lutte contre la violence à l'égard des femmes du Conseil de l'Europe), est considéré comme acte violent
«tout acte, omission ou conduite servant à infliger des souffrances physiques, sexuelles ou mentales, directement ou indirectement, au moyen de tromperies, de séductions, de menaces, de contrainte ou de tout autre moyen, à toute femme et ayant pour but et pour effet de l'intimider, de la punir ou de l'humilier ou de la maintenir dans des rôles stéréotypés liés à son sexe, ou de lui refuser sa dignité humaine, son autonomie sexuelle, son intégrité physique, mentale et morale ou d'ébranler sa sécurité personnelle, son amour-propre ou sa personnalité, ou de diminuer ses capacités physiques ou intellectuelles» (EG-S-VL, 1997).
Cette définition concerne exclusivement les femmes, ce qui ne signifie pas que la violence s'exerce de façon univoque des hommes à l'encontre des femmes. Néanmoins, la première constatation sociologique est que ce sont les femmes qui sont très majoritairement victimes des violences conjugales et des violences sexuelles. Il ne s'agit pas d'en conclure, comme certaines analyses peuvent le faire, que la violence masculine est inéluctable ou qu'il y aurait une sexualité masculine intrinsèquement agressive ou sadique, ou encore que la violence est une donnée humaine inévitable. Violence et non-violence ne permettent pas de tracer une ligne de partage entre les sexes, mais les rapports de domination engendrent des actes de violence et la violence masculine peut être analysée comme un mécanisme fondamental du contrôle so-
cial des femmes (Hanmer, 1977). Ainsi, les violences subies par les femmes expriment leur position de dominées - ce qui n'exclut pas de leur part des réactions, y compris violentes, à cette situation. Les femmes, lorsqu'elles se trouvent elles-mêmes en situation de pouvoir, peuvent être auteurs de violences, notamment envers les enfants.

Si , dans la société française de la fin du $\mathrm{XX}^{e}$ siècle, les femmes ont acquis une relative autonomie, notamment par rapport à la procréation, mais aussi économique grâce à leur présence sur le marché du travail et à l'élévation de leur niveau d'études, les effets de la domination masculine se font encore sentir. Les transitions d'un état à un autre engendrent des tensions, tandis que l'adaptation à de nouveaux modes de vie ou l'élaboration de nouveaux rapports sociaux entre les sexes se réalisent à un rythme différent dans chaque groupe social. La violence est présente dans tous les milieux sociaux, mais elle prend des formes spécifiques à chaque milieu. La nature des actes violents est liée à des éléments culturels, qui, au-delà des rapports hiérarchisés entre les sexes, renvoient à des normes intégrées par les individus, telles que le type de rapport au corps, à la parole. On peut supposer que les actes violents sont d'autant plus traumatisants, sur le plan psychologique, qu'ils sont en décalage avec les règles en vigueur dans le groupe d'appartenance.

Notre objet d'étude se limite aux violences interpersonnelles et exclut de son champ les formes de violence institutionnelle ou sociale. Toutefois, dans bien des cas, l'arbitrage est complexe, dans la mesure où les frontières entre ces formes ne sont pas toujours nettes. On peut avancer que la violence entre les personnes est souvent institutionnelle, dans la mesure où elle est liée aux règles de fonctionnement des institutions sur lesquelles s'appuie la société : la famille, l'école, le monde du travail, le système de protection sociale, de santé, de sécurité publique... Elle est également sociale, car dépendante des conditions de vie, de l'environnement et de la position dans la hiérarchie sociale ainsi que dans l'échelle des âges et des sexes.

Les manifestations des formes de violence individuelle sont multiples et les modes de classement souvent transitoires (Welzer-Lang, 1992). Les violences verbales, psychologiques et physiques se situent le plus souvent dans un continuum, aussi cette séparation apparaît peu opérationnelle. Notre approche de la violence repose sur une liste non exhaustive et non hiérarchisée de faits, gestes, actes, situations ou paroles susceptibles de porter atteinte à l'intégrité physique et morale de l'autre, et donc de constituer des actes de violence. Nous avons estimé
que les manifestations suivantes peuvent être considérées comme des atteintes à la personne :

- les gestes directs, avec impact sur le corps de l'autre, gestes volontaires qui font mal physiquement, atteinte à l'intégrité corporelle (coups ; gifles; frapper avec un objet contondant, coupant; utiliser une arme blanche, à feu ; étrangler ; cogner contre un mur, une table ; autres brutalités physiques...) ;
- les contraintes sexuelles, dont le harcèlement sexuel physique, gestes directs avec contact physique à connotation sexuelle, rapports sexuels sous la contrainte, pratiques sexuelles imposées, attouchements subis contre son gré ;
- les gestes qui contraignent ou qui menacent, avec ou sans impact sur le corps de l'autre : coincer, menacer avec ou sans arme ;
- les mesures de rétorsion qui entraînent la privation intentionnelle de la satisfaction de besoins élémentaires (nourriture, hygiène, habillement...), ces formes de privations étant souvent liées à l'absence de revenus propres de certaines femmes ;
- les gestes malveillants, gestes indirects, détournés, médiation d'un objet: jeter, déchirer, casser, détruire un objet, une fabrication de l'autre (plat cuisiné, objet fabriqué, création artistique ou autre...) ;
- les actes qui font souffrir par procuration : faire du mal à un tiers (s'en prendre aux enfants), à un animal ;
- les gestes qui créent pour l'autre une situation de dépendance, voire de détresse : partir, mettre à la porte, enfermer, emmener les enfants; - les gestes ou attitudes qui nuisent à l'autonomie de l'autre : contrôle et surveillance des dépenses, des sorties, des relations, du rapport aux amis et membres de la famille; gestes qui contraignent, obligent ; les brimades;
- les attitudes de dénégation de la personne : ne jamais tenir compte de son avis, la mettre à l'écart, ne pas lui parler ;
- les attitudes de mépris, infériorisation, dévalorisation, dénigrement ;
- les menaces, menaces de mort, intimidation, chantage affectif ;
- les avances sexuelles déplaisantes, images pornographiques imposées;
- les atteintes verbales: insultes, injures;
- les appels téléphoniques malveillants, avec ou sans connotation sexuelle.

Tous ces comportements peuvent se retrouver dans les différentes sphères de la vie sociale, publique et privée (famille, couple, travail, loisirs, sociabilité...).

L'ensemble de ces réflexions permet de situer les violences envers les femmes comme un élément du contexte social. Dans la littérature scientifique sur les facteurs sociaux de la santé des femmes, l'effet des violences reste peu abordé car le milieu scientifique, à l'image de la collectivité toute entière, a maintenu cette question à l'écart de son raisonnement, sauf à la situer comme une question psychologique, strictement individuelle, concernant la situation de «l'homme violent» ou de «la femme victime». Les violences envers les femmes ont un impact sur l'état de santé de la population féminine et il est nécessaire d'étudier cet impact. Si une récente piste pour expliquer les différences d'état de santé entre les groupes sociaux se développe autour de l'idée du manque d'autonomie et de maitrise de la situation des individus les plus défavorisés (Bosma et al., 1999 ; Evans et al., 1996 ; Karasek et Theorell, 1990), il convient d'intégrer la part des violences dans ce raisonnement, lesquelles violences attestent explicitement d'un rapport de domination et d'un manque d'autonomie - au moins temporaire - de la part des victimes. Ces violences peuvent se retrouver dans différents groupes sociaux, il reste à étudier avec soin comment elles contribuent ou non aux inégalités sociales de santé. Quoi qu'il en soit, étudier l'impact des violences sur la santé entre bien dans le champ d'une meilleure connaissance des déterminants sociaux de la santé.

## 3. Violences envers les femmes et état de santé : le point des connaissances

Ce n'est que récemment que les revues médicales - de santé publique, d'épidémiologie ou de spécialités telles que la psychiatrie ou la gynécologie-obstétrique - soulignent l'importance de la violence envers les femmes, s'efforcent de mesurer les conséquences en termes de santé pour la population féminine, et incitent à un rôle de dépistage plus actif de la part des soignants.

### 3.1. Atteintes à la santé physique

Les violences peuvent altérer la santé de différentes façons. Les homicides en constituent la forme extrême : en 1988, il y avait environ 110 homicides de femmes tuées par leur conjoint ou partenaire chaque année en Angleterre et pays de Galles (Black et Kaplan, 1988). Sans conduire jusqu'à la mort, les violences physiques ont des conséquences directes, de gravité variable selon l'intensité des coups reçus : fractures, entorses, plaies (Berrios et Grady, 1991). Les cliniciens des services d'urgence qui reçoivent les femmes battues décrivent les atteintes au visage : fracture du nez, des dents ou des membres supérieurs; entorse ou fracture des doigts, des poignets, luxation des épaules. Ils décrivent également des brûlures et des contusions provoquées par divers objets, comme des tabourets, des bouteilles ou d'autres instruments ménagers. En cas de rapports sexuels forcés, des atteintes traumatiques du périnée ou du bas de l'abdomen sont rapportées.

Les conséquences des violences sexuelles ont fait l'objet de plusieurs publications qui montrent les risques de maladies sexuellement transmissibles (Molina et Basinait-Smith, 1998), de troubles fonctionnels gynécologiques et de douleurs pelviennes chroniques (Plichta et Abraham, 1996 ; Jamieson et Steege, 1997 ; Golding et al., 1998).

Plusieurs études ont porté sur les violences durant la grossesse, et certaines rapportent un excès de morbidité périnatale lié aux violences dont les femmes enceintes sont victimes (Helton et al., 1987 ; Berenson et al., 1994 ; Poole et al., 1996 ; Webster et al., 1996). Aux États-Unis, le risque d'homicide des jeunes femmes âgées de 15 à 19 ans est significativement plus élevé dans l'année qui suit une naissance qu'en l'absence de naissance (Dietz et al., 1998). De même, dans certains pays en développement, le risque de mort violente est accru pour les adolescentes enceintes (Ronsmans et Khlat, 1999). Plusieurs auteurs mentionnent que, dans les couples où la femme est victime de violence, la grossesse est un moment sensible où la violence a pu débuter ou s'accentuer ; certains rapportent que la période qui suit une naissance est une période à risque élevé. Du matériel qualitatif, sous forme d'extraits d'entretiens, suggère que la grossesse, rendant les femmes plus vulnérables ou plus dépendantes aux yeux de leur partenaire et faisant surgir des sentiments de rivalité, favorise les actes violents. Cependant, cette affirmation n'est pas clairement étayée par les données statistiques disponibles. Ce point a été discuté à partir de données collectées aux

États-Unis (Gelles, 1988). Les auteurs avaient montré, à l'aide de données nationales de 1985, que le pourcentage de femmes victimes de violences conjugales était plus élevé pour les femmes enceintes durant la période de référence que pour les femmes non enceintes. L'analyse de cette différence a permis de conclure qu'il s'agissait d'un effet d'âge, les femmes enceintes étant plus jeunes que l'ensemble des femmes adultes. À âge égal, l'excès de fréquence n'était pas retrouvé pour les femmes enceintes. La violence conjugale pendant la grossesse a été rapportée avec des fréquences variant de $1 \%$ à $20 \%$ (Ballard et al., 1998). Pour la première fois en 1997, un système d'enregistrement sur échantillon représentatif de naissances, existant dans plusieurs Etats des États-Unis et répété chaque année, a introduit le pourcentage de violences physiques exercées par le partenaire pendant la grossesse parmi les divers indicateurs surveillés (CDC, 1999). La fréquence moyenne sur les Etats concernés était de 4,1 \%.

### 3.2. Atteintes à la santé mentale

Les effets en termes de santé mentale sont documentés par plusieurs études. Tous les travaux épidémiologiques qui ont testé ces effets sont concordants pour constater des répercussions négatives sur la santé mentale. Les pathologies associées sont les troubles dépressifs, l'anxiété, le syndrome post-traumatique, des troubles de la personnalité et des comportements auto-agressifs (Boudreaux et al., 1998 ; Fischbach et Herbert, 1997 ; Stewart et Robinson, 1998 ; Saurel-Cubizolles et al., 1997). Des effets se retrouvent à long terme (Kessler et Magee, 1994). Les violences dans l'enfance sont très associées à la présence de symptomatologie dépressive à lâage adulte ; les violences physiques à l'âge adulte sont très liées à la détérioration de l'estime de soi. Les tentatives de suicide sont plus nombreuses parmi les femmes victimes de violence que dans la population générale (Bergman et Brismar, 1991). Une étude, réalisée en France auprès de femmes ayant contacté un service spécialisé pour victimes de viol, décrit une fréquence élevée de troubles psychiatriques six mois après l'événement (Darves-Bornoz, 1997). L'intensité et l'aspect systématique des associations retrouvées conduit à se poser la question du rôle des violences subies par les femmes comme explicatif de l'excès de la morbidité dépressive dans la population féminine comparativement à la population masculine. Cette
hypothèse a surtout été avancée pour les violences sexuelles dans l'enfance (Whiffen et Clark, 1997).

Les liens entre l'usage de substances psychoactives et les violences sont décrits par plusieurs auteurs ; les données suggèrent un sens différent selon les substances (Kilpatrick et al., 1997). Ainsi, la consommation et la recherche de produits illicites peuvent être à l'origine de violences, tandis qu'il semble bien que, pour les femmes, la consommation addictive d'alcool ou de médicaments psychotropes puisse être une conséquence de violences (Berenson et al., 1991 ; Mazza et Dennerstein, 1996).

La plus grande partie des travaux sur les effets en matière de santé concernent la violence conjugale. Très récemment, des études ont été publiées sur les violences au travail. Certaines sont centrées sur le harcèlement sexuel, d'autres abordent plus généralement le harcèlement moral ou les violences physiques. Les effets sur différentes dimensions de la santé mentale - dépression, anxiété, hostilité - sont nettement mis en évidence (Richman et al., 1999). Parallèlement, les facteurs relatifs à l'ambiance et à l'organisation du travail qui sont associés à la fréquence des incidents violents au travail sont étudiés (Cole et al., 1997 ; Hashemi et Webster, 1998), ainsi que les caractéristiques socio-démographiques des travailleurs les plus exposés (Klein et al., 1997 ; LaMar et al., 1998).

Ces travaux sur les liens entre les violences et les atteintes à la santé constituent maintenant un ensemble important d'informations, avec des contributions de diverses disciplines médicales, des données de différents pays et des observations de meilleure qualité méthodologique qu'au début des publications sur le sujet.

Toutefois, cette évolution doit se poursuivre avec principalement deux efforts : d'une part, des observations sur échantillon représentatif de population ; il y a encore beaucoup de résultats obtenus auprès des femmes qui contactent des services spécialisés. Ce phénomène de sélection altère, bien sûr, fortement l'estimation de la fréquence des violences et ne permet pas d'estimer validement l'effet des violences sur la santé, soit par manque de groupe de comparaison, soit parce que les femmes sont sélectionnées aussi en termes d'état de santé.

D'autre part, les instruments de mesure des violences doivent être développés afin de prendre en compte les différentes facettes de la violence et de pouvoir en mesurer l'effet sur la santé. Les questionnaires standardisés américains existants, tels que le Conflict Tactic Scale utilisé
dans les enquêtes nationales (Straus et Gelles, 1986) ou le Abuse Assessment Scale utilisé notamment pour le dépistage systématique auprès de femmes enceintes venant consulter (Wiist et McFarlane, 1999), supposent une définition restrictive de la violence. Dans l'état actuel, les enquêtes nationales sur le sujet ont utilisé des questionnaires différents selon les pays. La validation des questionnaires est complexe par manque de «gold standard». À cet égard, la confrontation à des données qualitatives pour l'élaboration et la validation des questionnaires peut apporter beaucoup d'enseignement.

### 3.3. Le tôle des professionnels de la santé

Au-delà de la mesure de l'effet en matière de santé et des différentes questions méthodologiques que cette mesure soulève, la littérature médicale pose également la question en termes de pratiques professionnelles. Plusieurs études quantitatives se sont efforcées d'analyser l'attitude des soignants face aux violences envers les femmes. Elles montrent que les médecins sont nombreux à sous-estimer la fréquence des violences, qu'ils sont nombreux à ne jamais poser de questions à leurs patientes sur le sujet (Parsons et al., 1995 ; Hamberger et al., 1992). La formation des médecins n'inclut pas d'information pouvant les aider à aborder ces questions (Chambliss et al., 1995), et des propositions de modules d'enseignement spécialisés sur ce thème ont été formulées (Chez et Horan, 1999). Plusieurs éditoriaux et articles - certains sont signés par des leaders professionnels, présidents d'associations de gy-nécologues-obstétriciens, de généralistes ou de psychiatres - insistent sur le rôle de dépistage que doivent remplir les cliniciens (Jones, 1993 ; Richardson et Feder, 1995 ; Mezey et Bewley, 1997 ; Coughlin, 1997 ; Guillet-May et al., 1997) ; ce rôle de dépistage et de prévention est également attribué aux sages-femmes et aux infirmières (Helton et Snodgrass, 1987 ; Bohn, 1990). Des débats sur les pratiques sont engagés : faut-il que les soignants cherchent à dépister de façon systématique les femmes victimes ? Si oui, avec quels «outils» de dépistage ? Une fois identifiées, comment les femmes victimes peuvent-elles être aidées de la façon la plus efficace et la plus respectueuse à la fois ? Dans le cadre de la surveillance médicale des grossesses, où le futur enfant intervient comme un tiers légitimant l'intervention des soignants, les études se sont développées et, récemment, un essai contrôlé a été publié (Wiist et MacFarlane, 1999) montrant le nombre de femmes déclarant avoir été
victimes de violences durant la grossesse lorsque la question était systématiquement abordée, comparé au très faible nombre de femmes reconnues comme telles en l'absence de questions systématiques. Ce débat a également lieu pour les professionnels des thérapies familiales ou du conseil conjugal. Alors qu'il apparaît qu'une proportion élevée des couples qui recourent à ces thérapeutes ont eu des conflits violents dans les mois précédant cette démarche, cette situation reste très souvent inconnue du thérapeute (Aldarondo et Straus, 1994).

## 4. La fréquence des violences envers les femmes à partir des enquêtes nationales dans d'autres pays que la France (cf. tableau)

Tandis qu'en France peu de travaux quantitatifs ont été réalisés sur les violences envers les femmes, des enquêtes nationales effectuées dans d'autres pays ont montré que leur fréquence est élevée. La moitié des Canadiennes âgées de 18 ans ou plus déclaraient en 1993 avoir été victimes d'au moins un acte de violence au cours de la vie adulte - quel que soit l'auteur - et $10 \%$ l'avaient été au cours des 12 derniers mois (Rodgers, 1994 ; Statistique Canada, 1993). En Suisse, en 1994, 21 \% des femmes vivant en couple actuellement ou dans l'année écoulée ont déclaré avoir subi des actes de violence physique ou sexuelle de la part de leur conjoint au cours de leur vie et $6 \%$ au cours des 12 derniers mois (Gillioz et al., 1997). Aux Pays-Bas, en 1986, $26 \%$ des femmes âgées de 20 à 60 ans avaient subi des violences physiques dans le cadre d'une relation de couple ; cette fréquence était de $13 \%$ pour les femmes vivant en couple au moment de l'enquête (Römkens, 1992). En Finlande, en 1997, $22 \%$ des femmes mariées ou en couple déclaraient avoir subi des violences ou menaces physiques et sexuelles de la part de leur partenaire actuel, $9 \%$ pendant la dernière année ; $40 \%$ des femmes déclaraient avoir été victimes de la violence masculine, physique ou sexuelle, depuis leur quinzième anniversaire, $14 \%$ pendant les douze derniers mois ; les taux de prévalence étaient respectivement de 30 et $7 \%$ pour la violence physique (Heiskanen et Piispa, 1998). Aux États-Unis, en 1985, $11 \%$ des femmes vivant en couple déclaraient avoir subi des actes violents de la part de leur conjoint au cours des 12 derniers mois (Straus et Gelles, 1986). En Nouvelle-Zélande, en 1996,

Les enquêtes nationales quantitatives sur les violences envers les femmes

| Pays - Année | Auteurs | Population cible | Taille des échantillons | Technique de collecte |
| :---: | :---: | :---: | :---: | :---: |
| États-Unis, 1975 | Strauss et Gelles | Mariés ou vivant en couple | 2143 | Face à face |
| États-Unis, 1985 | Strauss et Gelles | Ménages (mariés ou vivant en couple hétérosexuel ou séparés depuis moins de 2 ans) | 6002 | Téléphone |
| États-Unis, 1988 | Brush | Mariés ou vivant en couple | 5474 | Face à face |
| Pays-Bas, 1986 | Römkens | Femmes | 1016 | Face à face |
| Canada, 1993 | Statistique Canada | Femmes vivant dans un ménage équipé du téléphone | 12300 | Téléphone |
| Suisse, 1994 | Gillioz, De Puy et Ducret | Femmes vivant en couple, mariées ou non, ou ayant vécu en couple au cours des 12 derniers mois | 1500 | Téléphone |
| Nlle-Zélande, 1996 | Morris | Femmes vivant ou ayant vécu en couple hétérosexuel au cours des 2 dernières années | 500 | Choix de l'interviewée : 264 en face à face, 236 par téléphone |
| Finlande, 1997 | Heiskanen et Piispa | Femmes | 4955 | Voie postale, questionnaires auto-administrés |
| OMS (Bangladesh, Brésil, Philippines, Ghana, Thaïlande, Pérou, Tunisie, Iran, Namibie, Japon, Italie) 1999, en cours | OMS | Femmes |  |  |
| France, 2000, en cours | Jaspard et al. | Femmes | 7000 | Téléphone |


| Pays - Année | Répondant/e |  | Temporalité des actes de violence |  | Sphère d'investigation | Auteurs des violences | Type de violence investiguée |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Âge | Sexe | Vie | Récent |  |  |  |
| Etats-Unis, 1975 | $>=18$ ans | H et F |  | 12 mois | Couple | Conjoint/e | Conflit : verbale, physique |
| États-Unis, 1985 | Individu ménage $>=18$ ans | H et F |  | 12 mois | Couple | Conjoint/e | Conflit: verbale, physique |
| États-Unis, 1988 |  | Het F |  | 12 mois | Couple | Conjoint/e | Conflit : physique |
| Pays-Bas, 1986 | 20-60 ans | F |  |  | Couple |  | Physique, sexuelle |
| Canada, 1993 | $>=18$ ans | F | 16 ans | 12 mois | Lieux public, privé et travail | H. in/connus, conjoint et ex-conjoint | Actes en infraction avec code criminel, <br> physique, sexuelle |
| Suisse, 1994 | 20-60 ans | F | Début du couple | 12 mois | Couple | Conjoint <br> Ex-conjoint $<1$ an | Psychologique, physique, sexuelle |
| $\begin{aligned} & \hline \text { Nlle-Zélande, } \\ & 1996 \\ & \hline \end{aligned}$ | $>=17$ ans | F | Début du couple | 12 mois | Couple | Conjoint Ex-conjoint <2ans | Psychologique, physique, sexuelle |
| Finlande, 1997 | 17-74 ans | F | 15 ans | 12 mois | Toutes sphères | H. in/connus, part. actuel/ex-part., Père, conjoint | Psychologique, physique, sexuelle |
| OMS, 1999 <br> (en cours) | 15-49 ans | H et F |  |  | Sphère domestique | Famille, couple |  |
| France, 2000 (en cours) | 20-59 ans | F | 18 ans, sauf sexuelle : vie entière | 12 mois | Toutes sphères | Hommes et femmes | Psychologique, <br> physique, sexuelle |

$24 \%$ des femmes en couple et $73 \%$ des femmes séparées déclaraient avoir été victimes de violences physiques ou sexuelles de la part du conjoint sur l'ensemble de leur vie adulte, et $15 \%$ des femmes en couple au cours des 12 derniers mois (Morris, 1997). Dans cette dernière enquête, un facteur très discriminant était l'appartenance ethnique, les femmes maoris déclaraient être victimes de violences beaucoup plus souvent que les autres femmes : les pourcentages au cours des 12 derniers mois étaient, respectivement, $28 \%$ et $10 \%$.

L'objectif principal de ces enquêtes nationales était de connaître l'ampleur du phénomène. Elles ne permettaient que très peu d'étudier les conséquences des violences, notamment pas en termes d'état de santé. Actuellement, l'Organisation Mondiale de la Santé s'efforce de favoriser cette approche. Le programme Santé des femmes de l'OMS, sous la direction de Claudia Garcia Moreno, a mis en place un projet d'enquête quantitative sur les violences domestiques et la santé des femmes, avec quatre objectifs :

- obtenir des estimations fiables de la prévalence de la violence contre les femmes dans différents pays ;
- documenter les conséquences des violences domestiques en termes de santé ;
- identifier et comparer les facteurs de risque et les éléments de «protection» face à la violence domestique, dans chaque pays et entre les pays;
- explorer et comparer les stratégies de recours utilisées par les femmes victimes de violence domestique.

L'enquête concerne les femmes de 15 à 49 ans, dans différents pays: Bangladesh, Ghana, Namibie, Pérou, Philippines, Thaïlande, dans une première étape, puis Italie et Japon. Des équipes locales de chercheurs doivent assurer l'adaptation du questionnaire et recueillir les données dans chaque pays concerné. Le recueil des données était prévu pour 1999 pour le premier groupe de pays.

## 5. Données disponibles en France sur la fréquence des violences

En France, aucune estimation de la fréquence des violences envers les femmes n'a pu être calculée au niveau national.

À l'heure actuelle, les statistiques disponibles portent sur les seules violences déclarées à la suite d'une démarche des femmes vers une ins-
titution. Chaque administration - Ministère de l'Intérieur, Ministère de la Défense, Ministère de la Justice - compile les statistiques de son activité, mais l'ensemble du phénomène leur échappe.

Quelle que soit la source, la statistique administrative souffre du faible recours des victimes aux autorités. À l'exception des agressions sexuelles, ce phénomène s'accroît globalement au cours des dernières années. Pour les statistiques judiciaires, la différence entre le nombre de plaintes (Ministère de l'Intérieur et de la Défense) et celui des condamnations (Ministère de la Justice) ne cesse d'augmenter.

Des associations d'écoute et d'aide aux femmes victimes de violences collectent des statistiques sur les personnes qui les contactent. La Fédération nationale Solidarité Femmes dispose d'un fichier informatisé des appels reçus (environ 9000 par an) ; le Collectif féministe contre le viol publie chaque année ses propres statistiques (environ 2500 appels pour viols et autres agressions sexuelles). Les associations connaissent bien les situations de violence vécues par les personnes qui se sont adressées à elles, mais on ignore l'ampleur réelle de ces phénomènes dans la population générale.

Dans ce contexte, les enquêtes sur la population s'avèrent indispensables pour prendre la mesure réelle des violences subies par les personnes.

Des enquêtes de victimation ont été réalisées en France sur la population générale : celle du Cesdip en 1986 ou celles incluses dans le dispositif d'enquêtes permanentes sur les conditions de vie des ménages de l'Insee (Crenner, 1996). Mais, en raison de la définition peu précise de l'agression, les données de ces enquêtes ne permettent pas une véritable analyse des phénomènes de violences envers les femmes.

Trois enquêtes nationales apportent des informations sur les violences sexuelles, une sur la population adulte (Spira et al., 1993) et deux auprès des jeunes (Lagrange et Lhomond, 1997 ; Choquet et Ledoux, 1994). Dans l'enquête sur l'«Analyse des Comportements Sexuels en France» auprès des personnes âgées de 18 à 69 ans, $4 \%$ des femmes déclaraient avoir subi au moins une fois des rapports sexuels imposés par la contrainte; dans $75 \%$ des cas, l'auteur était une personne connue (Spira et al., 1993). Six pour cent des adolescentes, de 11 à 19 ans, interrogées dans des établissements scolaires du cycle secondaire rapportaient avoir été victimes d'agressions de nature sexuelle (Choquet et Ledoux, 1994). Dans l'enquête ACSJ, 15 \% des filles de 15 à 18
ans et $2 \%$ des garçons de même âge déclaraient avoir subi des rapports sexuels sous la contrainte (Lagrange et Lhomond, 1997).

Dans un échantillon de femmes au moment d'une naissance, constitué dans plusieurs maternités, et sur lequel une enquête longitudinale a été réalisée, $4 \%$ des femmes déclaraient des violences de la part de leur conjoint ou ami au cours des 12 mois suivant l'accouchement d'un premier ou second enfant (Saurel-Cubizolles et al., 1997).

La plate-forme d'action de Pékin adoptée le 15 septembre 1995, à l'issue de la Quatrième Conférence Mondiale sur les Femmes, préconise, parmi les actions à mener pour prévenir et éliminer les violences envers les femmes, de :
«promouvoir la recherche, organiser la collecte des données et constituer des statistiques sur la prévalence des différentes formes de violence à l'encontre des femmes, en particulier la violence domestique, et encourager la recherche sur les causes, la nature, la gravité et les conséquences de cette violence, ainsi que sur l'efficacité des mesures mises en œuvre pour prévenir cette violence et la réparer.»
La demande de «statistiques précises concernant les violences faites aux femmes » apparaît dans le rapport pour l'Onu, Les femmes en France (Aubin et Gisserot, 1994), qui concluait par la recommandation d'une action intégrée de lutte contre la violence. Le projet d'une enquête nationale s'inscrit dans le cadre de cette action intégrée.

## 6. L'Enquête nationale sur les violences envers les femmes en France (Enveff)

Cette enquête est réalisée par une équipe pluridisciplinaire de chercheurs appartenant aux grandes institutions de recherche, à la demande du Service des Droits des Femmes du Secrétariat d'État aux Droits des Femmes et à la Formation permanente/Ministère de l'Emploi et de la Solidarité.

L'enquête qui va s'adresser à l'ensemble des femmes résidant en France, quelles que soient leurs conditions de vie familiale et sociale, a pour but de donner une image de la réalité du phénomène dans l'ensemble de la population.

Les objectifs sont de :

- cerner les divers types de violences interpersonnelles qui s'exercent envers les femmes, à l'âge adulte, dans leurs différents cadres de vie
(famille, travail, lieux collectifs), quel(s) que soi(en)t l(es) auteur(s) des violences ;
- analyser le contexte familial, social, culturel et économique des situations de violence ;
- étudier les réactions des femmes aux violences subies, leurs recours auprès des membres de leur entourage et des services institutionnels ;
- appréhender les conséquences de la violence sur le plan de la santé physique et mentale, de la vie familiale et sociale, et de l'usage de l'espace privé et public.

L'enquête sera réalisée auprès d'un échantillon de 7000 femmes âgées de 20 à 59 ans, représentatif à l'échelle de la France métropolitaine. Elle sera effectuée par téléphone au cours du premier semestre 2000 par les services d'un institut de sondage.

### 6.1. La mesure des violences

Les violences sont mesurées par la survenue d'incidents précis et le plus factuels possible. Compte tenu de la définition très subjective de la violence, ce terme n'est pas utilisé dans le questionnaire. Les questions ont la forme suivante, par exemple: «Au cours des 12 derniers mois, est-il arrivé que quelqu'un vous gifle, frappe ou exerce d'autres brutalités physiques contre vous ?»

Les questions doivent permettre d'avoir une mesure des violences psychologiques (verbales, harcèlement, menaces), des violences physiques (coups, objet lancé sur la personne, empoignades, brûlure ou blessure intentionnelles, etc.) et des violences sexuelles (attouchements, viol et tentative de viol).

Les événements sont soumis aux femmes dans le contexte où ils sont survenus afin, d'une part, de favoriser la remémoration ou la déclaration et, d'autre part, d'avoir des indicateurs de violences dans des sphères différentes de la vie comme les espaces publics, les lieux de travail, le couple, la famille élargie.

Enfin, deux périodes de référence sont retenues: les 12 derniers mois et la vie entière, en cohérence avec toutes les études déjà réalisées sur ce sujet.

### 6.2. La mesure de l'état de santé et du recours aux soins

Un questionnaire d'état de santé général a été établi, comprenant le plus possible des mesures déjà éprouvées par d'autres études épidémiologiques.

Il comprend, en particulier, un indicateur d'auto-perception de la santé, une description des maladies chroniques, les atteintes traumatologiques (comme les fractures, les entorses, les plaies ayant nécessité suture), la détresse psychologique mesurée par le General Health Questionnaire en 12 items (Goldberg et Williams, 1988), les troubles anxieux post-traumatiques et les maladies sexuellement transmissibles. La consommation médicale est décrite par le nombre de consultations (généralistes, gynécologues, psychiatres, autres spécialistes), les hospitalisations, les arrêts de travail, la prise de traitements psychotropes. Ces données seront collectées de façon identique auprès de toutes les femmes de l'échantillon, victimes ou non d'actes violents. De plus, en cas de déclaration de violences, une question sera posée sur le recours à un professionnel de santé.

Au début de l'entretien, l'objectif de l'enquête sera présenté de façon très générale et ne parlera pas de violences: «une enquête sur les conditions de vie, de santé et de sécurité en France ». Le questionnaire, qui sera passé par téléphone, est construit de telle sorte que les questions socio-démographiques et biographiques sont posées au début, suivies du questionnaire sur la santé. Jusque-là, les femmes interrogées ignorent que l'enquête porte sur les violences qu'elles ont pu subir. Ensuite, les questions sur les violences seront posées. Cet ordre a été retenu afin de réduire un possible effet de la remémoration immédiate des violences subies sur la déclaration de l'état de santé.

Afin de s'assurer de la faisabilité d'une telle enquête, l'équipe de recherche a procédé à une enquête pilote visant à éprouver l'ensemble de la procédure. Cette enquête pilote a eu lieu du 19 novembre au 14 décembre 1998 auprès d'un échantillon de ménages, représentatif des ménages abonnés au téléphone de deux régions : l'Île de France et la Bretagne. Un ensemble de 484 femmes a pu être interrogé selon la méthode Cati (collecte assistée par téléphone et informatique).

Ce test a permis de montrer la bonne acceptabilité du questionnaire par les répondantes et a renforcé certaines de nos hypothèses (Jaspard et al., 1999). En particulier, il a établi que :

- une proportion très élevée de femmes ayant subi des violences en ont, au moment de l'enquête, parlé pour la première fois ;
- une très faible part des femmes ayant subi des violences physiques ou sexuelles ont porté plainte, elles ont plus fréquemment porté plainte dans le cas des agressions physiques ;
- la réaction des femmes interrogées et leurs réponses au questionnaire ont également mis en évidence l'importance des violences psychologiques et la nécessité de prendre en compte le continuum des violences ; - dans le cadre, neutre, de cette enquête anonyme, les femmes interrogées ont accepté de répondre à des questions touchant à leur vie intime ;
- il s'est opéré, au fur et à mesure que l'entretien avançait, une sensibilisation des enquêtées favorable à la déclaration des actes de violence qu'elles avaient subis ;
- la violence des femmes est aussi rapportée par les répondantes qui souhaitent pouvoir rendre compte de l'ensemble des agressions qu'elles ont subies, même si celles-ci émanent d'autres femmes.

Un des grands enseignements de l'enquête pilote aura été de mettre en évidence l'ampleur du silence et l'occultation des violences par les femmes qui les subissent, et combien la réalité du phénomène échappe au système statistique français et reste méconnue. L'analyse de ces données, bien qu'assez globale compte tenu de la faible taille de l'échantillon, a montré des relations très fortes entre divers indicateurs d'état de santé - tout spécialement les indicateurs de santé mentale et particulièrement les tentatives de suicide - et l'expérience des violences par les femmes au cours de leur vie adulte.

## 7. Conclusion

La littérature scientifique récente sur ce sujet souligne la fréquence des violences envers les femmes et leurs conséquences en termes de santé. Elle tend à signifier que les violences envers les femmes posent, de fait, un problème de santé publique (Kornblit, 1994). Toutefois, dans les approches plus globales sur les déterminants sociaux de l'état de santé, les chercheurs intègrent très rarement les violences parmi les facteurs explicatifs. À la fois comme facteurs de risque de plusieurs atteintes à la santé et comme facteurs de confusion dans l'analyse du rôle étiologique d'autres facteurs sociaux ou comportementaux, les
épidémiologistes sous-estiment probablement le rôle des violences dans leurs conclusions actuelles (Sorenson et Saftlas, 1994).

L'ambition du projet d'enquête nationale réside dans l'obtention d'informations le plus valides possible sur les violences subies auprès d'un échantillon représentatif de femmes adultes, dans un pays où, culturellement, les violences envers les femmes restent un sujet peu abordé. Si cet objectif est atteint, nous serions en mesure, d'une part, de quantifier les violences envers les femmes dans la population française et, d'autre part, d'estimer la part de certains troubles de la santé et de la consommation médicale attribuable aux violences.

Au delà des effets sur l'état de santé de la population féminine, les conséquences des violences subies par les femmes se répercutent dans tous les domaines de la vie sociale, et il faut se garder d'en faire un problème exclusif de santé publique. Les causes de la violence et les réponses à apporter, tant en termes de traitement que de prévention, se situent à l'interface du médico-psycho-socio-judiciaire. La violence envers les femmes est sans aucun doute un «phénomène social total», et les chercheurs qui tentent de cerner globalement ce phénomène doivent situer leurs analyses au croisement des disciplines et contextes sociaux, médicaux, psychologiques et juridiques.

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## Annexe

## Premiers résultats de l'enquête Enveff ${ }^{2}$ Extrait de la conférence de presse du 4 octobre $2001{ }^{3}$

La collecte des données de l'enquête Enveff a été réalisée de mars à juillet 2000, par téléphone, selon la méthode «Cati» (collecte assistée par téléphone et informatique), auprès d'un échantillon aléatoire de 6970 femmes, représentatif de l'ensemble des femmes âgées de 20 à 59 ans résidant en métropole hors institution.

Le taux global de refus des enquêtées a été de $12 \%$, et le taux d'abandon de $5 \%$, ce qui assure une bonne participation des femmes à cette enquête.

Les premiers résultats ont été diffusés deux mois après la mise à disposition du fichier de données, lors de la conférence de presse du 6 décembre 2000. Le numéro de janvier 2001 de Population et Sociétés ${ }^{4}$ est la première publication de l'enquête. Le rapport final a été remis aux commanditaires en juin 2001 et un livre est en cours d'édition ${ }^{5}$.

[^25]Proportions (\%) de femmes ayant déclaré avoir subi
au cours des 12 derniers mois
des violences verbales, psychologiques, physiques ou sexuelles
dans divers cadres de vie, selon l'âge

| Type de violence | Age des femmes interrogées (ans) |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | $20-24$ | $25-34$ | $35-44$ | $45-59$ | Total |
| Dans l'espace public * $N=6970$ ) |  |  |  |  |  |
| Agressions verbales | 24,6 | 15,2 | 11,7 | 8,6 | 13,2 |
| Agressions physiques | 2,7 | 1,6 | 1,2 | 1,7 | 1,7 |
| Avances et agressions sexuelles | 6,4 | 2,6 | 0,9 | 0,5 | 1,9 |
| Au travail ** (N = 4 756) |  |  |  |  |  |
| Agressions verbales | 11,7 | 10,1 | 8,8 | 6,2 | 8,5 |
| Pressions psychologiques | 20,2 | 18,6 | 15,2 | 15,7 | 16,7 |
| - dont harcèlement psychologique (a) | 5,2 | 4,7 | 3,6 | 3,1 | 3,9 |
| Agressions physiques | 0,6 | 0,6 | 0,7 | 0,5 | 0,6 |
| Avances et agressions sexuelles | 4,3 | 2,8 | 1,9 | 0,8 | 2,0 |
| Violences conjugales *** (N = 5 908) |  |  |  |  |  |
| Agressions verbales | 6,1 | 4,1 | 4,3 | 3,9 | 4,2 |
| Chantage affectif | 2,7 | 1,4 | 2,3 | 1,6 | 1,8 |
| Pressions psychologiques répétées | 37,6 | 26,1 | 23,0 | 21,0 | 24,3 |
| - dont harcilement psychologique (b) | 12,1 | 8,3 | 7,7 | 6,7 | 7,9 |
| Agressions physiques | 3,9 | 2,5 | 2,5 | 2,2 | 2,5 |
| Viol et autres actes sexuels imposés | 1,2 | 0,9 | 1,0 | 0,6 | 0,9 |

(a) Parmi les trois composantes de cet indice (brimades, dénigrement, mise à l'écart), l'une au moins a une occurrence fréquente.
(b) Avoir subi plus de trois faits constitutifs de pressions psychologiques, dont l'un au moins a une occurrence fréquente.
Champ :

* ensemble des femmes de 20 à 59 ans ;
** femmes de 20 à 59 ans ayant exercé une activité professionnelle au cours des 12 mois précédant l'enquête ;
*** femmes de 20 à 59 ans ayant eu une relation de couple au cours des 12 mois précédant l'enquête.
Source : enquête Enveff, 2000.


## Les violences verbales, psychologiques, physiques ou sexuelles subies dans les différents cadres de vie au cours des 12 derniers mois

Pour estimer la fréquence des divers types de violences (à l'exception des agressions verbales), il a été nécessaire de construire des indicateurs regroupant plusieurs variables :

- les agressions physiques : donner des gifles, des coups avec ou sans objet contondant, menacer avec une arme, tenter d'étrangler ou de tuer, exercer d'autres brutalités physiques ; dans le cadre conjugal, enfermer ou empêcher de sortir, abandonner sur la route (en voiture), empêcher de rentrer chez soi ; vol avec violences dans l'espace public ;
- les avances sexuelles : «pelotage»; dans le cadre du travail, faire des avances sexuelles déplaisantes, imposer des images pornographiques ;
- les agressions sexuelles : attouchement, tentative de rapport sexuel forcé, rapport sexuel forcé ; dans le cadre conjugal, imposer des rapports sexuels par la force, imposer des gestes sexuels refusés ;
- les pressions psychologiques : dans le cadre conjugal, menacer de s'en prendre aux enfants, contrôler les sorties, les relations; imposer des comportements ; dévaloriser, dénigrer ; refuser de parler, empêcher d'avoir accès aux ressources ; au travail, brimades, dénigrement, mise à l'écart.

Dans les trois sphères (espace public, travail, couple), quel que soit le type de violence, les femmes les plus jeunes, entre 20 et 24 ans, ont déclaré en avoir subi plus que leurs aînées, et c'est dans le cadre du huis clos conjugal que s'exercent le plus de violences physiques.

## Les violences conjugales au cours des 12 derniers mois

Toutes les femmes ayant vécu une relation de couple avec ou sans cohabitation au cours des 12 derniers mois ont été interrogées. Un certain nombre d'entre elles se sont séparées de leur conjoint récemment et ne sont donc plus en couple au moment de l'enquête. Ces dernières ont déclaré avoir subi avec cet ex-conjoint, dans l'année écoulée, trois à quatre fois plus de violences que les autres.

L'expression «femmes battues» couramment utilisée ne rend pas compte de la totalité des violences conjugales puisque les pressions psychologiques y sont prépondérantes (cf. tableau).

Dans de nombreux cas, les formes d'agressions verbales, psychologiques, physiques et sexuelles s'entrecroisent, aussi l'expression «situation de violence conjugale» apparaît plus à même de rendre compte de la réalité vécue par le plus grand nombre de victimes. C'est pourquoi nous avons construit un indica-
teur global de violences conjugales ${ }^{6}$ : près d'une femme sur 10 ayant vécu en couple pendant l'année écoulée a été en situation de violence conjugale au cours des 12 derniers mois. Cet indicateur est subdivisé en deux niveaux afin de montrer la progression de la gravité des situations. Le niveau «grave» correspond surtout aux insultes répétées et au harcèlement psychologique et, dans des cas plus rares, à des agressions physiques ou sexuelles uniques ( $7 \%$ ). Le niveau «très grave» regroupe les situations de cumul de violences ; ici se produisent souvent des agressions physiques ou sexuelles, répétées ou associées aux violences verbales et au harcèlement psychologique ( $3 \%$ ).

Avec l'avancée en âge, la proportion de situations de violence «graves» diminue, ce qui apparaît plutôt lié au recul du harcèlement psychologique ; par contre, les situations «très graves» se rencontrent à tous les âges de la vie. Un écart d'âge de 10 ans ou plus entre conjoints entraîne un doublement des situations de violence. Les fréquences de ces situations de violence ne sont pas affectées par la présence d'enfants.

Les femmes mariées, et plus généralement celles qui vivent avec leur conjoint, déclarent nettement moins de violences que les femmes en couple qui ne partagent pas le même domicile (environ un tiers en moins), mais les situations de violence «très graves » augmentent avec la durée de l'union pour les femmes mariées.

Les chômeuses et les étudiantes ont l'indicateur global le plus élevé (plus de $11 \%$ ). Toutefois, les chômeuses sont deux fois plus que les étudiantes dans une situation de violence «très grave» ( $2,9 \%$ contre $1,3 \%$ ), elles sont ainsi proches des autres inactives et des ouvrières (environ $3 \%$ ) et, de façon plus inattendue, des femmes cadres ( $2,6 \%$ ).

Une grande instabilité professionnelle et le retrait du monde du travail semblent favoriser l'émergence de situations de cumul de violences. L'instabilité professionnelle masculine a un impact encore plus grand sur la violence conjugale. Celle-ci est très présente chez les chômeurs non indemnisés ( $16 \%$ dont $8 \%$ de situations de violence «très graves ») ou autres inactifs sans doute exclus du marché de l'emploi. Pour l'un ou l'autre des partenaires, avoir vécu une seule fois une période de chômage accroît relativement peu le développement de situations de violence conjugale ; par contre, la multiplication des périodes de chômage double la proportion globale des situations de violence et triple celle des violences «très graves ».

Le lien entre le niveau de revenu et les situations de violence est ténu ; il ressort que c'est moins le niveau de revenu qui importe que l'accès direct à l'argent et la dépendance financière. Le manque d'argent, lié aux situations de

[^26]précarité, et surtout la dépendance financière des femmes sans revenu personnel sont des facteurs aggravants des situations de violence conjugale.

À l'exception des violences sexuelles, qui se produisent dans l'intimité, dans plus de la moitié des cas, les enfants sont témoins des scènes de violence, et ceci d'autant plus que la situation est très grave et dure depuis longtemps : près de deux tiers des femmes en situation «très grave» de violence ont déclaré que leurs enfants étaient présents lors des agressions.

Le fait d'avoir vécu des difficultés pendant l'enfance (privations matérielles, mesure d’assistance éducative, placement judiciaire ou administratif, conflit avec les parents, conflit entre les parents, problème d'alcoolisme, de drogue, sévices ou coups répétés) représente un autre facteur aggravant des situations de violence conjugale. Plus d'un quart ( $26 \%$ ) des femmes qui ont mentionné avoir subi plusieurs problèmes dans leur enfance sont victimes de violences conjugales, contre $6 \%$ de celles qui n'ont dénoncé aucune difficulté durant l'enfance. Les liaisons les plus fortes s'observent pour les sévices et les coups répétés dans l'enfance ( $28 \%$ ) et le placement en institution ou famille d'accueil ( $27 \%$ ), intervenu souvent à la suite de mauvais traitements pour celles qui ne sont pas orphelines.

Les femmes victimes de violences sexuelles avant l'âge de 18 ans sont presque trois fois plus que les autres en situation de violence conjugale. Celles qui ont subi des attouchements répétés par des proches sont cinq fois plus en situation de violence «très grave» que l'ensemble ( $12 \%$ contre $2,5 \%$ ).

Près de la moitié des victimes ont parlé des agressions subies pour la première fois lors de l'enquête, $31 \%$ de celles qui vivent des situations très graves et $60 \%$ des autres. Les violences sexuelles sont les plus cachées (dans $69 \%$ des cas), ou dénoncées tardivement par rapport aux autres violences, dont environ la moitié des victimes s'étaient plaintes dans l'immédiat.

## Les violences dans les relations avec un ex-conjoint

Parmi les femmes qui ont eu des contacts avec un ex-conjoint au cours des 12 derniers mois, $17 \%$ ont déclaré avoir subi au moins un fait de violence à cette occasion. Ces agressions atteignent avant tout les femmes qui ont des relations nécessaires avec leurs anciens partenaires en raison de la présence d'enfants ou de la forme institutionnalisée de l'union rompue (divorcées, séparées). Leur position économique semble plus fragile (chômage ou profession d'employée). Les atteintes verbales touchent $13 \%$ des femmes. Dépassant largement tous les taux de violences identiques dans les autres cadres de vie, les agressions physiques marquent les relations avec un exconjoint pour $8 \%$ des femmes. Les violences sexuelles, dénoncées par quatre femmes sur cent, semblent aussi beaucoup plus fréquentes dans les relations avec un ex-conjoint que dans tout autre cadre de vie.

Un grand nombre de femmes se sont séparées d'un partenaire violent. Après la rupture, les rapports, quand ils sont obligatoires, restent très conflictuels, voire brutaux. Quoi qu'il en soit, il est plus facile de dénoncer les exactions d'un conjoint dont on est séparé que celles de la personne avec laquelle on vit. Amenées à parler d'un contexte privé qu'elles ont en principe choisi, la majorité d'entre elles évoquent un climat conjugal plutôt serein. Pourtant, au cours du questionnement, nombre de répondantes dénoncent - pour beaucoup, c'est la première fois - des comportements violents de leur conjoint. De fait, les femmes victimes de violences conjugales se trouvent dans une situation paradoxale, entre le maintien d'une relation affective ou d'une cellule familiale écrasante et une aspiration à exister en tant que personne à part entière.

## Les violences au travail au cours des 12 derniers mois

Au travail, cinq catégories de violences ont été distinguées:

- les pressions psychologiques, regroupant trois faits: «imposer des horaires, des tâches, des services dont personne ne veut»; «critiques répétées et injustes»; «être mise à l'écart»; ces pressions, dénoncées par $17 \%$ des femmes, représentent les atteintes les plus fréquentes dans la sphère professionnelle ; la multiplicité et la répétition des faits constituent le phénomène qualifié de harcèlement psychologique, subi par 3,9 \% des femmes;
- les agressions verbales, incluant injures et menaces, mentionnées par 8,5 \% des femmes;
- les agressions physiques, comprenant les coups et blessures et menaces avec une arme, qui concernent $0,6 \%$ des femmes ;
- les destructions du travail et de l'outil de travail, dénoncées par 2,2 \% des femmes;
- les agressions et le barcèlement sexuels, dont la définition retenue ici est plus large
que celle contenue dans le Code pénal et le Code du travail depuis 1992: incluant les avances non désirées ou l'obligation de voir des images pornographiques, le pelotage et l'exhibitionnisme ou le voyeurisme, quel qu'en soit l'auteur, indépendamment de la notion d'autorité introduite par la loi ; 1,9 \% des femmes rapportent des faits de harcèlement d'ordre sexuel ${ }^{8}$, et $0,1 \%$ des agressions (attouchements, tentatives de viol et viol) en même temps que du harcèlement.

Les pressions psychologiques comme les atteintes sexuelles sont des faits qui tendent à se reproduire plusieurs fois au cours de l'année. En revanche,
7. Pour une personne abusant de l'autorité que lui confère sa fonction, est puni le fait de harceler autrui en usant d'ordres, de menaces ou de contraintes dans le but d'obtenir des faveurs de nature sexuelle.
8. Harcèlement d'ordre sexuel pour le différencier du harcèlement sexuel au sens strict de la loi.
les agressions et brutalités physiques sont des événements isolés ( $80 \%$ n’ont eu lieu qu'une seule fois).

Les femmes les plus jeunes, âgées de 20 à 24 ans, sont deux fois plus injuriées ou menacées que leurs collègues de plus de 45 ans, elles sont presque trois fois plus souvent confrontées à une destruction de leur travail ou de leur outil de travail, et surtout elles subissent six fois plus souvent un harcèlement d'ordre sexuel ou des agressions sexuelles ( $6,4 \%$ contre 1,9 \% pour l'ensemble).

Le mode de vie des femmes (mariées, divorcées, célibataires vivant en couple ou seules) est indépendant de leur position d'emploi, et pourtant il influence fortement leur exposition aux violences dans le travail : c'est le fait d'être mariée et non pas seulement d'être en couple qui semble protéger des brimades, comme des critiques toujours plus fréquentes ainsi que des mises à l'écart. Les mères de jeunes enfants expriment une forte sensibilité aux brimades et impositions d'horaires dans leur travail.

Les femmes exerçant une profession indépendante et les ouvrières déclarent moins de violences que les autres salariées; les cadres et professions intellectuelles supérieures et les professions intermédiaires en déclarent plus. La sensibilité plus grande des catégories sociales supérieures (cadres et professions intermédiaires) montre clairement la perception socialement différenciée des atteintes, psychologiques notamment. Les femmes exerçant une profession libérale ont le taux le plus élevé d'atteintes sexuelles.

Certaines professions connaissent des situations contrastées du fait même de conditions de travail distinctes ; ainsi les infirmières ou les personnels de ménage, lorsqu'elles travaillent en institutions, subissent des conditions de travail souvent plus difficiles que celles qui travaillent de manière indépendante comme les infirmières et les femmes de ménage qui exercent au domicile d'autres personnes. Pour certaines catégories d'employées, les taux de harcèlement d'ordre sexuel et d'agressions sexuelles sont particulièrement élevés : c'est le cas des agents de sécurité, policières, gendarmes (10 \%). Ces agressions de nature sexuelle s'accompagnent d'une situation plus générale d'atteintes et de pressions psychologiques élevées.

Qu'il soit occasionnel ou régulier, le travail de nuit expose davantage aux injures. Le harcèlement d'ordre sexuel et les agressions sexuelles augmentent aussi pour celles qui travaillent la nuit.

## Les auteurs des violences au travail

Les injures et les agressions verbales sont majoritairement le fait des clients et usagers (dont $79 \%$ d'hommes). Les agressions physiques, rares à l'échelle d'une année, ont quasi exclusivement des auteurs masculins, alors que les destructions du travail, perpétrées majoritairement par des collègues, impliquent, de ce fait même, une proportion importante de femmes (les 2/3).

Les auteurs masculins de harcèlement d'ordre sexuel et d'agressions sexuelles varient selon la nature des faits : les avances sexuelles sont d'abord le fait de collègues, de supérieurs hiérarchiques puis de clients et d'usagers; en revanche, si le «pelotage » est, également, majoritairement le fait des collègues ( $46 \%$ ), les clients et les usagers sont davantage susceptibles d'un tel comportement ( $27 \%$ ) que les supérieurs hiérarchiques (19 \%) .

Un rapport équilibré des effectifs d'hommes et de femmes sur le lieu de travail évite une part des atteintes au travail, alors qu'une sur-représentation masculine accroît les manifestations de violence : respectivement $15 \%$ et $23 \%$ pour les atteintes psychologiques et $8 \%$ et $12,5 \%$ pour les injures et violences verbales.

## Les violences dans l'espace public au cours des 12 derniers mois

«L'espace public» est considéré ici comme un environnement «extérieur », par opposition au couple ou au monde du travail qui est aussi un environnement relativement familier. Si le terme «espace public » évoque souvent la rue, la sphère à laquelle il se réfère ici recouvre des lieux aussi divers - et plus ou moins publics - que les grands magasins, les clubs de sport, les restaurants ou les boîtes de nuit, la plage ou les jardins publics, les transports en commun, etc.

Près d'un cinquième des femmes ( $19 \%$ ) ont subi au moins une agression dans l'espace public au cours des 12 derniers mois. Ces violences sont parfois multiples ou répétées au cours de l'année (un tiers des cas).

Les agressions les plus fréquentes dans l'espace public sont les insultes (13 \% des femmes en ont subi dans les 12 derniers mois), le fait d'être suivies dans leurs déplacements ( $5 \%$ ), de subir la vue d'exhibitionnistes ( $3 \%$ ) ou d'être importunées sexuellement ("pelotées », $2 \%$ ). Les agressions physiques (vols lorsqu'ils sont accompagnés de violences, les brutalités physiques comprenant les gifles et coups, menaces ou attaques armées) concernent $1,7 \%$ des femmes au cours de l'année. Les atteintes et agressions sexuelles (attouchements, tentatives de viol, viols) sont beaucoup plus rares à l'échelle d'une année, néanmoins $0,1 \%$ des répondantes en ont été victimes.

En général, les violences subies par les femmes dans l'espace public leur sont imposées par des inconnus (dans les trois quarts des cas). Toutefois, dans le cas particulier des brutalités physiques et des menaces ou attaques armées, les victimes connaissent leur agresseur dans $38 \%$ des cas.

Les violences dans l'espace public sont très majoritairement commises par des hommes, les insultes et les brutalités physiques un peu moins que les autres puisqu'elles sont le fait de femmes dans un cas sur cinq. Les brutalités
exercées à l'occasion d'un vol sont souvent le fait d'adolescents (dans $56 \%$ des cas).

Les violences à caractère sexuel sont des actes commis par des hommes d'âge adulte, sauf en ce qui concerne le pelotage imposé, dans $22 \%$ des cas, par des adolescents.

La rue est l'un des espaces publics où se produit le plus grand nombre d'agressions ( $38 \%$ ). Les femmes y sont davantage exposées au risque d'être suivies, de subir des coups ou des menaces avec armes. Les voitures et les transports en commun fournissent des cadres relativement fréquents d'agressions ( $18 \%$ et $17 \%$ ). En voiture, il s'agit quatre fois sur cinq de situations où les femmes sont suivies. Les transports en commun sont plus le lieu des pelotages et des vols. Viennent ensuite les espaces communs d'immeubles et les lieux de sorties pour boire, manger ou danser ( $8,5 \%$ ).

Les agressions ne surviennent pas nécessairement dans les endroits déserts, que les femmes fréquenteraient seules, la nuit. En effet, elles se produisent généralement dans des circonstances banales, relevant d'un usage habituel et souvent quotidien de l'espace public : les trois quarts d'entre elles se sont produites dans un endroit fréquenté régulièrement, $67 \%$ ont eu lieu le matin ou dans la journée, dans $65 \%$ des cas, dans des espaces fréquentés sur le moment par d'autres personnes, et $28 \%$ des agressions ont eu lieu alors que les victimes étaient accompagnées.

Les jeunes femmes (moins de 25 ans) sont de loin les premières victimes dans l'espace public, même si l'on tient compte de leur mode de vie, comme leurs fréquentes sorties, qui les expose plus que les autres. Ce sont elles qui déclarent avoir subi le plus fort taux d'insultes au cours de l'année ( $25 \%$ contre $13 \%$ en moyenne) et le plus fort taux d'atteintes sexuelles, c'est-à-dire le fait d'être suivie, pelotée ou exposée à un exhibitionniste ( $22 \%$ contre $8 \%$ en moyenne). Les agressions physiques ne sont pas significativement liées à l'âge ; en revanche, elles semblent toucher plus fortement les femmes dans une situation de relative vulnérabilité, qu'elle soit sociale ou relationnelle.

Les taux de violences subies au cours de l'année augmentent continûment avec la taille de l'agglomération. Ce lien apparent entre la taille de l'agglomération et la fréquence des agressions doit s'analyser en tenant compte des différents contextes sociaux de chaque espace géographique et du fait que les habitantes des grandes agglomérations n'ont pas les mêmes profils sociaux et les mêmes activités et fréquentations de l'espace public que les habitantes des zones rurales.

Ce ne sont pas les violences portant le plus directement atteinte au corps que les femmes risquent le plus dans l'espace public, mais un ensemble de brimades (être insultée, suivie, «pelotée», subir un exhibitionniste) qui fait peser une réelle menace sur elles et entrave leur liberté de circulation. Toutes ces formes d'incivilité et de harcèlement à caractère sexuel sont plus fréquen-
tes dans les grandes agglomérations ; plus qu'un espace ultra violent, les grandes agglomérations apparaissent comme un espace inégalitaire et sexiste. Quel que soit le lieu, les violences graves, bien que peu fréquentes, constituent néanmoins une menace dans l'espace public, qu'il s'agisse d'agressions physiques ou sexuelles.

## Violences envers les femmes et santé

Dans cette analyse, les violences physiques et sexuelles subies par les femmes ont été prises en compte quel que soit le cadre où elles se sont produites. Au total, $4 \%$ des femmes ont déclaré des violences physiques au cours des 12 derniers mois. Parmi elles, les femmes ayant rapporté un seul événement ont été distinguées de celles qui en ont déclaré plusieurs; ces dernières représentent $2 \%$ de l'échantillon. Un pour cent des femmes ont déclaré des agressions sexuelles au cours des 12 derniers mois.

Le niveau de détresse psychologique, mesuré par une échelle standardisée (le General Health Questionnaire en 12 items) est très lié à l'expérience des violences : $10 \%$ des femmes n'ayant pas subi de violences présentent un niveau élevé de détresse psychologique, ce pourcentage est de $27 \%$ parmi les femmes ayant subi une agression physique et atteint $43 \%$ chez les femmes qui en ont subi plusieurs. Il est de même significativement plus élevé pour les femmes victimes de violences sexuelles, $28 \%$, et de $40 \%$ pour les femmes ayant subi à la fois des violences physiques et des violences sexuelles.

Alors que $5 \%$ des femmes n'ayant subi aucune violence ont un niveau élevé de stress post-traumatique (décrit par la survenue fréquente de cauchemars, troubles anxieux et crises de panique), ce pourcentage est de $17 \%$ pour les femmes ayant subi un événement physiquement violent et $25 \%$ pour celles qui en ont subi plusieurs. Ce pourcentage est également augmenté pour les femmes victimes de violences sexuelles.

Le taux de tentatives de suicide au cours des 12 derniers mois est très lié aux violences : de $0,2 \%$ pour les femmes qui n'ont pas rapporté de violence à $3 \%$ pour les femmes ayant subi une agression physique et $5 \%$ pour les femmes en ayant subi plusieurs. Ce pourcentage est de $4 \%$ pour les femmes victimes de violences sexuelles et atteint $10 \%$ parmi le petit groupe de femmes qui déclarent à la fois des violences physiques et sexuelles.

Les femmes victimes de violences ont un niveau de consommation médicale plus élevé. Elles ont plus souvent consommé de façon régulière des médicaments psychotropes (anxiolytiques, antidépresseurs ou hypnotiques) au cours des 12 derniers mois : $10 \%$ des femmes n'ayant pas subi de violences, $20 \%$ des femmes déclarant une agression physique et $30 \%$ des femmes en déclarant plusieurs. Les femmes victimes de violences physiques sont plus

État de santé et consommation médicale selon l'existence de violences physiques ou sexuelles au cours des 12 derniers mois

| État de santé | Au cours des 12 derniers mois |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Aucune violence | Violences physiques |  | Violences sexuelles | Violences physiques et sexuelles |
|  |  | Une fois | $\geq 2$ fois |  |  |
| Effectif | 6634 | 150 | 133 | 84 | 31 |
|  | \% | \% | \% | \% | \% |
| Détresse psychologique* |  |  |  |  |  |
| Faible | 72,6 | 42,0 | 34,0 | 39,2 | 22,7 |
| Modérée | 16,9 | 30,6 | 22,6 | 32,5 | 36,9 |
| Élevée | 10,5 | 27,5 | 43,4 | 28,3 | 40,5 |
| Indice de stress** post-traumatique |  |  |  |  |  |
| Faible | 58,9 | 33,8 | 21,6 | 29,5 | 16,7 |
| Modéré | 36,0 | 48,8 | 53,5 | 58,6 | 63,9 |
| Élevé | 5,2 | 17,4 | 24,9 | 11,9 | 19,4 |
| Tentative de suicide |  |  |  |  |  |
| Consommation de psychotropes |  |  |  |  |  |
| Jamais | 78,6 | 64,2 | 49,9 | 60,8 | 41,6 |
| Occasionnelle | 11,7 | 15,7 | 19,6 | 15,8 | 18,8 |
| Régulière | 9,6 | 20,1 | 30,5 | 23,4 | 39,6 |
| Consultations auprès d'un généraliste |  |  |  |  |  |
| Aucune | 18,9 | 7,9 | 14,0 | 15,6 | 0,0 |
| 1 à 4 | 56,8 | 62,8 | 49,1 | 56,0 | 66,7 |
| 5 ou plus | 24,2 | 29,4 | 36,8 | 28,4 | 33,3 |
| $\begin{gathered} \text { Arrêt de travail }{ }^{* * *} \text { (N) } \\ \text { au moins un arrêt } \end{gathered}$ | (5 042) | (118) | (95) | (65) | (26) |
|  | 28,4 | 39,9 | 39,5 | 39,3 | 68,8 |

Champ : Ensemble des femmes interrogées.

* La détresse psychologique était mesurée à l'aide d'une échelle standardisée - le General Health Questionnaire - en 12 items; un niveau faible correspondait à 2 items positifs ou moins, un niveau modéré entre 3 et 5 items positifs et un niveau élevé à 6 items positifs ou plus.
** L'indice de stress post-traumatique est calculé à partir de la fréquence des trois symptômes suivants au cours des 12 derniers mois: cauchemars, état d'anxiété et crises de panique.
*** Ne concerne que les femmes qui avaient un emploi au cours des 12 derniers mois.
nombreuses à avoir consulté de façon répétée - 5 fois ou plus au cours de l'année - un médecin généraliste, particulièrement celles victimes de plusieurs agressions physiques. De même, le fait de consulter un spécialiste de la santé mentale - psychiatre, psychothérapeute ou psychologue - est beaucoup plus fréquent pour les femmes victimes de violences : plus de $20 \%$ d'entre elles au lieu de $6 \%$ parmi les femmes qui n'ont pas subi de violences. Enfin, les femmes ayant subi des violences physiques ou sexuelles étaient plus nombreuses à avoir eu un arrêt de travail au cours des 12 derniers mois, $39 \%$ contre $28 \%$ pour les femmes qui n'ont déclaré aucune agression.

Toutes ces différences demeurent significatives même après prise en compte de l'âge des femmes, de leur niveau d'études, de leur situation matrimoniale, de leur statut vis-à-vis de l'emploi et de la taille de l'agglomération où elles résident. L'augmentation du risque est particulièrement importante pour les tentatives de suicide, aussi bien en lien avec les violences physiques que sexuelles. Ces résultats soulignent l'importance des violences et l'attention qui devrait y être apportée lors de la prise en charge des femmes faisant une tentative de suicide.

L'état de santé des femmes au moment de l'enquête est également associé à l'existence de violences antérieures. Ainsi, les risques, mesurés en termes de santé, liés aux violences subies au cours des 12 derniers mois, sont encore plus importants pour les femmes qui ont été victimes de violences dans le passé.

# CHRONIC STRESS <br> AND THE SOCIAL PATTERNING OF WOMEN'S HEALTH IN CANADA* 

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#### Abstract

Existing research on the social patterning of women's health draws attention to the significance of social roles and socioeconomic position. Although we know a great deal about health differences according to the occupancy of these positions, we know a lot less about why such patterns exist. This paper addresses this gap by examining the pathways through which social structure is linked to bealth using data from a 1994 Canadian national probability sample of women, aged 25-64 years. We begin by charting differences in women's self-rated ill-health, distress, and reports of long-standing bealth conditions by socioeconomic position and social role occupation. We then assess the extent to which these patterns can be understood in relation to the chronic stress arising from these social locations. Socioeconomic position, assessed by bousing tenure, education, and bousehold income, was positively related to bealth. Employment enbanced women's health, as did being currently married and a mother living with cbildren. The ongoing stressors that distinguish the experiences of various structural


[^27]locations accounted for some of the bealth effects of social structure, particularly for socioeconomic position. However, chronic stress was largely irrelevant to the pathways linking social roles to health. In fact, employed women and parents living with children enjoyed better health despite their greater stress.

Keywords: Women's health, Roles, Socioeconomic position, Cbronic stress.

## Résumé

Les travaux sur les facteurs sociaux de la santé des femmes attirent l'attention sur l'importance des rôles sociaux et de la situation socio-économique. Si nous connaissons bien les différences de santé en fonction de ces divers statuts, on connaît beaucoup moins le pourquoi de ces différences. Les auteurs tentent de combler cette lacune en examinant les mécanismes par lesquels la structure sociale est reliée à la santé, grâce à des données canadiennes recueillies en 1994 auprès d'un échantillon aléatoire national représentatif des femmes de 25 à 64 ans. Les auteurs commencent par une visualisation des différences d'auto-évaluation de la mauvaise santé, de l'angoisse et de la morbidité de longue durée, en fonction du statut socio-économique des femmes et de leurs rôles sociaux. Elles évaluent ensuite dans quelle mesure ces différences peuvent être interprétées en lien avec le stress chronique engendré par de tels environnements sociaux. Le statut socioéconomique, représenté par le mode d'occupation du logement, le niveau d'instruction et le revenu du ménage, entretient une relation positive avec la santé. L'activité économique améliore la santé des femmes, de même que le fait d'être mariée et mère de famille vivant avec ses enfants. Les facteurs de stress permanent qui différencient le vécu des diverses strates expliquent certains effets de la structure sociale sur la santé, en particulier le statut socio-économique. Néanmoins, le stress chronique est bien incapable d'expliquer les mécanismes qui relient les rôles sociaux à la santé. En réalité, les femmes qui travaillent et les parents qui vivent avec des enfants sont en meilleure santé malgré un stress plus intense.

Mots-clés : Santé féminine, Rôles, Situation socioéconomique, Stress chronique.

## 1. Introduction

Two areas of research dominate the literature on the social patterning of women's health. The first and most widely researched examines the health effects of the gendered division of labour. Predominant in this "gender" model is an interest in social roles and health that has resulted in
a legion of studies documenting the health rewards and costs associated with being a paid worker, a partner, and a mother. The second area of research on health differences among women concerns the social division of work in the public sphere and its associated distributive inequalities. Because of its focus on the labour market, it has often been called the "job" model of health differences.

While existing research draws attention to the significance of social roles and socioeconomic position for health, its focus on their occupancy tells us only part of the story. That is, we know a great deal about the social patterning of health according to major institutionalized roles and unequal distribution of resources, but much less about why such health patterns exist. Where effort has been directed toward assessing the meaning of social positions and their implications for health, it has been limited to the quality of social roles, while the socioeconomic dimensions of women's lives remain relatively unexplored. Any compelling explanation of the health consequences of the social division of labour must consider what it is about both key structural contexts that give rise to health inequalities among women.

The conceptual and methodological tools of social stress theory and research are relevant to investigating the pathways linking social structure and health. An important underlying assumption of this work is that wellbeing is deeply affected by socially patterned differences in life circumstances, including "the relatively enduring problems, conflicts, and threats that many people face in their daily lives" (Pearlin, 1989, p. 245). Hence, social roles and socioeconomic position are consequential for health because they signify differential exposure and vulnerability to the problems of daily life. Despite its widespread use in the mental health literature, especially to examine gender differences in health, social stress has received less attention when it comes to health disparities among women.

This paper contributes to research on the social patterning of women's health by examining pathways through which social structure may be linked to health. We begin by charting differences in women's health by socioeconomic position and social role occupation. We then assess the extent to which these patterns are accounted for by chronic stress arising from these social locations.

## 2. Social roles and health

Early interest in the relationship between social roles and health was sparked by women's entry into the labour force on a massive scale, beginning in the 1960s. Proponents of role strain theory worried that this social change would harm the health of women because of the additional stress of multiple, competing roles (Gove, 1984). In contrast, those supporting the role accumulation hypothesis suggested that multiple roles were beneficial to health because they provide additional opportunities to enhance individuals' sense of purpose and meaning in life (Waldron et al., 1998). Empirical testing of these divergent views suggests that women's experiences are more complex than this simple dualism implies. On average, employed women enjoy better health than those who are not employed (Arber, 1997; Waldron, 1991; Walters et al., 1995). Some of this relationship can be explained by the selection of healthier women into the labour force, but longitudinal research supports the view that women's health benefits from the instrumental and symbolic rewards of paid work (Repetti et al., 1989; Waldron and Jacobs, 1989). Although men derive greater advantage, marriage is also health-protective for women, mainly because of the social support and increased material well-being that it provides and the health-promoting behaviours that it encourages (Waite, 1995; Umberson, 1992; Waldron et al., 1996). In contrast to worker and partner roles, the health effects of being a parent are less clear. Some studies find parental status unrelated to women's health (Bullers, 1994), others report an inverse association between parenthood and health (Noor, 1996), while still others show motherhood to be health-enhancing under some conditions and health-damaging under others (Rosenfield, 1989; Walters et al., 1996; Bartley et al., 1999). Recently, Evenson and Simon (1999) added another dimension of complexity to the social roles debate with their finding that noncustodial parents were most disadvantaged in mental health terms, compared with parents living with their children, parents whose grown-up children had left home, and nonparents.

The contingent nature of the relationship between health and social roles has led researchers to attempt to unpack these structural positions. Some suggest that the quality of social roles, rather than their mere occupancy, is fundamental to understanding the relationship between roles and health (Barnett and Marshall, 1991; Barnett, 1994). Taking up this theme, Walters and colleagues (Walters et al., 1997; Walters et al., 1998)
found that time pressures in family roles, unappreciated work, multiple, competing demands, and the feeling of being too available to other people were inversely related to women's mental health. In contrast, having a good relationship with a partner, including being able to talk about worries and confide in him/her, getting along in general, and his/her understanding of work demands were health-enhancing.

Related research on occupational health tells a similar story. Although it is better to be working than not, the health-promoting effects of employment are conditional on the type of job one has (Loscocco and Spitze, 1990; Griffin et al., this volume). For example, lack of control over work is particularly problematic for health when jobs are also psychologically demanding, that is, time-pressured, fast-paced, and intense (Schnall et al., 1994). Although the health effects of work have been examined extensively for men, there has been much less research on women, despite the fact that women are much more likely than men to be exposed to conditions of high job strain (Karasek and Theorell, 1990).

## 3. Socioeconomic position and health

The second focus of research on social patterns in women's health is socioeconomic position. We know that socioeconomic disadvantage harms women's health, although there is some disagreement about the strength of the gradient, relative to that for men (for reviews, see McDonough et al., 1999; Arber, 1997). The relationship between women's socioeconomic position and health has not received as much research attention as social roles, partly because of the difficulty in conceptualizing and measuring the class position of those without direct labour market ties. However, even as women exhibit more sustained and significant labour market attachment, preoccupation with the gendered division of labour has given rise to the interpretation of women's employment primarily in the relational context of the household. Hence, entry into paid work is often regarded as an additional role, rather than a structural location emerging from differential access to productive and distributive resources.

Sara Arber (1991) argued persuasively to bridge the gender and job models in studies of women's health differences by conceptualizing paid employment as both a social role and dimension of socioeconomic position (see also Matthews and Power, this volume). Moreover, her conten-
tion that the meaning of social roles depends on the socioeconomic context within which roles are enacted explicitly recognizes the intersecting axes of these two key dimensions of structural differentiation. This was supported empirically by her finding, in a British national probability sample of adult women, of significant interactions involving employment and marital status, and employment and housing tenure. Specifically, structural "disadvantage" (being previously married or living in council housing) was consequential for health only if women were not employed.

A major difficulty in assessing the extent to which social roles and socioeconomic position interact is technical in nature. That is, sample sizes of most population-based health surveys are not large enough to detect differences in health effects emerging from the simultaneous occupation of multiple social roles, as well as the additional dimension of socioeconomic stratification. The large number of possible role combinations also brings with it the potential of considerable variability that complicates the search for patterns. This has led to the creation of profiles representing particular combinations of socioeconomic position and social roles (Bartley et al., 1999).

In summary, we know that women's health is affected by location in the social structure as it is defined by social roles and socioeconomic position. However, we know less about why this is so. In this regard, research on social stress suggests that these positions are important for health because they signify differences in stress experiences arising from patterned differences in life circumstances (Turner et al., 1995). It is to this research that we now turn.

## 4. Social stress and health

A central feature of social stress research is the role of the psychosocial environment in the genesis of health inequalities. Stress is defined as
"a state of arousal resulting either from the presence of socioenvironmental demands that tax the ordinary adaptive capacity... or from the absence of the means to attain sought-after ends" (Aneshensel, 1992, p. 16).
The stress process is said to be socially patterned because stressful experiences and the resources to counteract them are differentially distributed in society in ways that are inextricably linked to structural inequalities (Elstad, 1998).

Stress is typically conceptualized as life events or sudden changes that require major behavioural adjustment in a relatively short period of time (e.g., marital breakdown, death, financial loss, and residential moves). However, critics of this focus call for greater attention to the role of more persistent demands or chronic stressors that challenge people over prolonged periods of time, including barriers to achieving life goals, inequity in rewards, excessive or inadequate environmental demand, frustration of role expectations, and resource deprivation (Wheaton, 1983; Turner et al., 1995). The weight of evidence suggests that only chronic stress is distributed by social position, with individuals from lower status, disadvantaged groups experiencing more ongoing, chronic stress than their more advantaged counterparts. Their greater exposure to persistent stressors, in turn, accounts for their poorer health. The stress literature suggests, further, that these individuals are also more vulnerable to the health-damaging consequences of chronic stress. Notably, they experience poorer health than others under similar conditions of chronic stress because their lack of material, personal, and social resources restricts their abilities to cope with ongoing strains (for a review, see Thoits, 1995).

Despite growing attention to the social patterning of the stress process, there has been little research focus on differences in these experiences among women. The analysis that follows addresses this gap. Using data from the Canadian National Population Health Survey (NPHS), we examine the effects of socioeconomic position and social roles on health and assess the extent to which these relationships may be explained by differential exposure and vulnerability to chronic stress.

## 5. Methods

### 5.1. Data

The NPHS is a longitudinal study of a representative sample of household residents in Canada. Initiated in 1994, data collection is scheduled to occur every second year for six years. In each of just over 20,000 households, limited information was collected from all household members and one individual, aged 12 years and older, was selected for a more in-depth interview (see Tamblay and Catlin, 1995 for details). The initial household response rate was 88.7 percent, while the selected person response rate was 96.1 percent. The present analysis uses 1994 Wave I data
collected from a sample of 6,000 women who were $25-64$ years of age, inclusive.

### 5.2. Measures

Health. Three health measures are examined in this analysis: self-rated ill-health, distress, and long-standing health conditions. Self-rated ill-health measures respondents' evaluations of their health as excellent, very good, good, fair, or poor (scored 1 through 5, respectively) with higher scores reflecting greater levels of poor health. Distress is an unpleasant subjective state (Ross and Van Willigen, 1997) measured by the University of Michigan revision of the Composite Diagnostic Interview (CIDI) (World Health Organization, 1990). Distress increases as scores, ranging from 0 to 24, increase. Long-standing bealth conditions is a dichotomous variable indicating the presence of a long-term condition diagnosed by a health professional. Those reporting one or more such conditions were coded 1 and others were coded 0 . In multivariate analyses involving self-rated ill-health and distress as outcomes, long-term conditions was also used as a control for spuriousness. Specifically, observed relationships between selfassessed and mental health and social positions could arise from their common association with long-term health conditions. The latter could be selecting women into socioeconomic disadvantage and out of social roles and contributing to psychological distress and poor self-rated health. Adjustment for long-term conditions allows us to consider, albeit imperfectly, the relationships between social position and distress and self-rated health, net of this process.

Socioeconomic Position. Three measures of socioeconomic position were used in the models. Education consists of three dummy variables indicating the highest level of formal schooling attained: less than a secondary school diploma $($ yes $=1 ;$ no $=0)$; secondary school diploma $($ yes $=1 ;$ no $=0)$; and some post-secondary school $(\mathrm{yes}=1 ;$ no $=0)$. Those with post-secondary credentials (i.e., university degree or college diploma) served as the reference group. Housing tenure is a dummy variable coded 1 if the dwelling is owneroccupied and 0 otherwise. Income adequacy is based on the respondent's report of household income for the past twelve months, adjusted for family size and expenditures on basic needs. Dummy variables were created for four levels of income adequacy: low income (yes $=1$; no $=0$ ); low middle income (yes $=1 ;$ no $=0$ ), middle income (yes $=1 ;$ no $=0$ ) and upper middle income (yes =1; no =0). High income households were the reference
group (for Statistics Canada's income adequacy definitions, see Appendix).

Social Roles. Marital status, parental status, and employment status are associated with social roles that are relevant to different aspects of family and work life. Marital status consists of dummy variables for single (yes $=1 ;$ no $=0$ ) and formerly married (yes $=1 ;$ no $=0$ ). Currently married or living as common-law served as the reference group. Parental status is comprised of dummy variables for parents living with their children (yes $=1$; no $=0$ ) and parents not living with their cbildren (yes $=1 ;$ no $=0$ ). Nonparents are the reference group. The category 'parents not living with their children' represents both "empty-nesters" and women who, for unknown reasons, do not have custody of their children. Employment status is coded 1 if respondents are employed and 0 otherwise. Paid workers are distinguished further by their work hours. Employed full-time is coded 1 for those who report working 30 hours or more per week and 0 for those working less.

Cbronic Stressors. A modified, abbreviated version of Wheaton's (1991, cited in Turner et al., 1995) chronic stress inventory was used to construct six measures of enduring role strain and ambient strain, including financial, social life, relationship, parent, family health, and environment stressors. Rather than a total count of these chronic stressors as used in other work (Turner et al., 1995), we retain them in their disaggregated form to assess the impact of different kinds of stress on women's health. In each case, a coded value of 0 corresponds to no reported stress. Financial stress is a dichotomous indicator that codes people who agreed with the statement, "You don't have enough money to buy the things you need," as 1 and others, 0 . Social life stress is a summary score for five items reflecting the respondent's perceptions of their ability to meet the expectations of others (range $=0-5$ ). Relationship stress is a dichotomous measure that codes as 1 , any reports of problems with, or finding, an intimate partner. Those without such problems were coded 0 . Cbild stress is a summary score for two items about children's affective states and behaviour problems (range $=0-2$ ) asked of parents only. Family bealth stress is a summary score of two items reflecting respondents' concerns about the health of immediate family members (range $=0-2$ ). Environment stress is a summary score for three items that indicate problems with residential neighbourhood and friends (range $=0-3$ ). A seventh measure of chronic stress, job strain, is derived from a modified version of the Job Content Questionnaire (JCQ) (Karasek, 1985). It is a combination of low control
over, and high psychological demands of, work tasks. Job control was measured by five items and psychological demands, by two. Total scores for job control and demands were each divided by their respective number of items to achieve equal weighting of the two constructs. The reweighted scores for job control and demands were then summed (range $=0-7.0$ ) and dichotomized at the $75^{\text {th }}$ percentile. Those with the highest scores (i.e., above the $75^{\text {th }}$ percentile) were coded 1 , and others, 0 for job strain (see Walters et al., this volume for an item list).

Age is included in all the models by using the mid-point of eight categories ranging from 25-29 years to 60-64 years.

### 5.3. Analytic model

In examining social structural differences in the stress process, two chronic stressors, job strain and child stress, are only applicable to workers and parents, respectively. We estimated the effects of such conditionally relevant variables (Ross and Mirowsky, 1992), while simultaneously including those who are working and not working, and parents and nonparents in the estimation. In the case of job strain, the effects of paid work (W) and job strain (JS) on distress (D) (range 0-24) are estimated by the following:
$D=b_{0}+b_{1}(W)+b_{2}(W)(J S)$
For those who are not working $(W=0)$, the equation reduces to:
$D=b_{0}$
Among those who are working $(W=1)$, the expression becomes:
$D=b_{0}+\left[b_{1}+b_{2}(J S)\right]$
If Equation (2) is subtracted from Equation (3), the difference in distress between the employed and the nonemployed depends on the job strain experienced by those who are working.
$D=\left[b_{1}+b_{2}(J S)\right]$
According to this formulation, distress among the employed differs from the nonemployed by an average amount (represented by $b_{1}$ ), plus an aver-
age effect that depends on the stress levels of their jobs (represented by $\left.b_{2}\right)$ (Ross and Mirowsky, 1992, p. 224).

Ordinary least squares regression was used to examine predictors of self-rated ill-health and distress, while logistic regression was used in examinations of long-standing health conditions. Sampling weights were applied to all estimations to adjust for non-response and differential selection probabilities. In addition, the effect of a complex sampling design on variance estimates was taken into consideration by inflating standard error estimates by the square root of the average design effect (1.64) of the survey. Sample design information that would permit more precise calculation of design effects (Wolter, 1985) was unavailable in the public use data files for the NPHS.

## 6. Results

### 6.1. The social patterning of health and chronic stress

In Table 1, age-adjusted means for self-rated ill-health, distress, and long-standing health conditions are presented for women in varying social positions. Health status improved as education and household income increased, although some non-linearity in the relationships was evident. Women living in owner-occupied homes also fared better than those in rental accommodation. The size of the socioeconomic gap in health was greatest for distress and smallest for self-rated ill-health.

Disparities in age-adjusted health status across the social role configurations were variable. Employed women enjoyed better health than the nonemployed, but there were few health differences based on work hours. Married women reported the best health and formerly-married women, the worst. Patterns in the distribution of health across parental status groups were equivocal. Parents whose children were no longer living with them were worse off in health terms than other women, but differences between parents living with children and nonparents varied.

As was the case for socioeconomic position, the size of relative health disparities across social roles depended on both the social position and health measure in question. The formerly married were considerably less well off in terms of distress and long-standing health conditions than the married (distress ratio $=1.42$; chronic conditions ratio $=1.36$ ), but differences were not as large for self-rated ill-health (ratio $=1.07$ ). The health advantage of employed women displayed a similar pattern. With

Table 1
Mean ${ }^{a}$ self-rated ill-health, distress, and long-standing health conditions by education, housing tenure, income adequacy, employment, marital and parental status for women, 25-64 years, NPHS, Canada, 1994

|  | Self-rated <br> ill-health | Distress | Long-standing <br> health conditions |
| :--- | :---: | :---: | :---: |
| Education |  |  |  |
| < Secondary school diploma | 2.58 | 4.34 | 0.41 |
| Secondary school diploma | 2.24 | 3.68 | 0.32 |
| Some post-secondary school | 2.20 | 3.77 | 0.41 |
| Post-secondary degree/diploma | 2.05 | 3.26 | 0.36 |
| Ratio lowest/highest | 1.26 | 1.33 | 1.14 |
| N | 5,993 | 5,857 | 5,989 |
| Housing tenure |  |  |  |
| Nonowner | 2.42 | 4.49 | 0.42 |
| Owner | 2.16 | 3.36 | 0.36 |
| Ratio nonowner/owner | 1.12 | 1.34 | 1.17 |
| N | 5,998 | 5,859 | 5,993 |
| Household income |  |  |  |
| Low | 2.66 | 4.89 | 0.46 |
| Low middle | 2.37 | 5.19 | 0.43 |
| Middle | 2.27 | 3.77 | 0.39 |
| Upper middle | 2.17 | 3.32 | 0.35 |
| High | 1.98 | 3.08 | 0.35 |
| Ratio lowest/highest | 1.34 | 1.59 | 1.31 |
| N | 5,774 | 5,650 | 5,770 |
| Employment status |  |  |  |
| Nonemployed | 2.48 | 4.39 | 0.44 |
| Employed part-time | 2.12 | 3.33 | 0.36 |
| Employed full-time | 2.07 | 3.27 | 0.33 |
| Ratio nonemployed/employed full-time | 1.20 | 1.34 | 1.33 |
| N | 5,966 | 5,830 | 5,962 |
| Marital status |  |  |  |
| Formerly married | 2.34 | 4.83 | 0.49 |
| Never married | 2.36 | 4.09 | 0.36 |
| Married | 2.19 | 3.39 | 0.36 |
| Ratio formerly married/married | 1.07 | 1.42 | 1.36 |
| N | 5,998 | 5,860 | 5,993 |
| Parental status | 2.16 | 3.74 | 0.37 |
| Nonparent | 2.34 | 3.97 | 0.47 |
| Parent not living with children (PNC) | 2.22 | 3.55 | 0.35 |
| Parent living with children (PC) | 1.05 | 1.12 | 1.34 |
| Ratio PNC/PC | 5,820 | 5,793 | 5,818 |
| $N$ |  |  |  |

a. Means are age-standardized using 5-year age groups.
the exception of long-standing health conditions (ratio $=1.34$ ), the health disparity between the two categories of parents was small.

The distribution of age-adjusted chronic stressors by socioeconomic position and social roles is presented in Table 2. It reveals a pattern of decreasing stress with increasing socioeconomic advantage, but the strength of this gradient varied according to the source of stress. The education disparity across the chronic stressors was greatest for job strain (ratio $=2.38$ ) and financial stress (ratio $=1.71$ ), while housing tenure and household income differences were largest for financial and environment stress.

The distribution of chronic stressors by social roles was more complex. Generally, stress disparities were variable and smaller in magnitude for social roles than for socioeconomic position. They were largest across marital categories and smallest according to parental status. With the exception of job strain, formerly married women reported more chronic stress than other women. Currently married women fared better (i.e., had less stress) than the never-married except for social life and family health stress. Marital status mattered the most for financial strain and relationship stress.

Patterns of mean chronic stress according to employment status indicate that, generally, the employed experienced less stress than the nonemployed. The differences were most pronounced for financial stress and environment stress, where the nonemployed reported stress in the order of 25 percent and 38 percent greater, respectively, than the scores of fulltime paid workers. Disparities in chronic stress according to parental status were varied. With the exception of social life stress, women no longer living with their children reported more stress than those who did, but differences between the latter group and nonparents were variable.

In summary, these descriptive patterns reveal that structurally based differences in women's health depend on the health and social position indicators being examined. Socioeconomic differences were largest in magnitude for distress, while social role disparities were most pronounced for long-standing health conditions and more consistent for employment and marital status than for parental status.

Table 2
Mean ${ }^{a}$ chronic stress measures by education, housing tenure, income adequacy, employment, marital and parental status for women, 25-64 years, National Population Health Survey, Canada, 1994

|  | Social life <br> stress | Financial <br> stress | Relationship <br> stress | Child stress | Environ- <br> ment stress | Family <br> health stress | Job strain |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education |  |  |  |  |  |  |  |
| < Secondary school diploma | 1.46 | 0.53 | 0.34 | 0.54 | 0.42 | 0.31 | 0.50 |
| Secondary school diploma | 1.36 | 0.40 | 0.28 | 0.48 | 0.34 | 0.33 | 0.36 |
| Some post-secondary school | 1.43 | 0.39 | 0.27 | 0.55 | 0.35 | 0.32 | 0.26 |
| Post-secondary degree/diploma | 1.27 | 0.31 | 0.21 | 0.42 | 0.28 | 0.28 | 0.21 |
| Ratio lowest/highest | 1.15 | 1.71 | 1.62 | 1.29 | 1.50 | 1.11 | 2.38 |
| $N$ | 5,874 | 5,874 | 5,874 | 4,631 | 5,874 | 5,874 | 3,498 |
| Housing tenure |  |  |  |  |  |  |  |
| Nonowner | 1.37 | 0.54 | 0.34 | 0.56 | 0.53 | 0.35 | 0.34 |
| Owner | 1.36 | 0.33 | 0.24 | 0.47 | 0.26 | 0.29 | 0.26 |
| Ratio nonowner/owner | 1.01 | 1.64 | 1.42 | 1.19 | 2.04 | 1.21 | 1.31 |
| N | 5,876 | 5,876 | 5,876 | 4,633 | 5,876 | 5,876 | 3,500 |
| Household income |  |  |  |  |  |  |  |
| Low | 1.40 | 0.68 | 0.31 | 0.58 | 0.50 | 0.27 | 0.35 |
| Low middle | 1.57 | 0.63 | 0.41 | 0.59 | 0.52 | 0.38 | 0.42 |
| Middle | 1.38 | 0.44 | 0.27 | 0.51 | 0.37 | 0.32 | 0.33 |
| Upper middle | 1.33 | 0.34 | 0.24 | 0.44 | 0.28 | 0.30 | 0.28 |
| High | 1.35 | 0.18 | 0.22 | 0.48 | 0.24 | 0.29 | 0.20 |
| Ratio lowest/highest | 1.04 | 3.78 | 1.41 | 1.21 | 2.08 | 0.93 | 1.75 |
| N | 5,666 | 5,666 | 5,666 | 4,464 | 5,666 | 5,666 | 3,389 |


| Employment status |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nonemployed | 1.34 | 0.45 | 0.29 | 0.50 | 0.40 | 0.35 |  |
| Employed part-time | 1.37 | 0.33 | 0.24 | 0.48 | 0.32 | 0.27 | 0.32 |
| Employed full-time | 1.38 | 0.36 | 0.25 | 0.49 | 0.29 | 0.29 | 0.27 |
| Ratio nonemployed/employed full-time | 0.97 | 1.25 | 1.16 | 1.02 | 1.38 | 1.21 |  |
| $N$ | 5,847 | 5,847 | 5,847 | 4,616 | 5,847 | 5,847 | 3,491 |
| Marital status |  |  |  |  |  |  |  |
| Formerly married | 1.54 | 0.58 | 0.36 | 0.61 | 0.44 | 0.37 | 0.28 |
| Never married | 1.15 | 0.48 | 0.36 | 0.58 | 0.42 | 0.28 | 0.34 |
| Married | 1.37 | 0.34 | 0.23 | 0.46 | 0.30 | 0.30 | 0.28 |
| Ratio formerly married/married | 1.12 | 1.71 | 1.56 | 1.33 | 1.47 | 1.23 | 1.00 |
| $N$ | 5,878 | 5,878 | 5,878 | 4,635 | 5,878 | 5,878 | 3,500 |
| Parental status |  |  |  |  |  |  |  |
| Nonparent | 1.07 | 0.34 | 0.21 |  | 0.33 | 0.30 | 0.26 |
| Parent not living with children (PNC) | 1.29 | 0.37 | 0.29 | 0.52 | 0.37 | 0.34 | 0.34 |
| Parent living with children (PC) | 1.49 | 0.41 | 0.27 | 0.48 | 0.32 | 0.30 | 0.28 |
| Ratio PNC/PC | 0.87 | 0.90 | 1.07 | 1.08 | 1.16 | 1.13 | 1.21 |
| $N$ | 5,820 | 5,820 | 5,820 | 4,602 | 5,820 | 5,820 | 3,457 |

a. Means are age-standardized using 5-year age groups.

### 6.2. Socioeconomic position, social roles, chronic stress, and health

While the data presented in Tables 1 and 2 highlight differences in health and chronic stress according to social location, they tell us nothing about the relationship between health and persistent stressful experiences. Tables 3 through 5 present a series of models that test whether structural differences in self-rated ill-health, distress, and long-standing health conditions, respectively, are the result of differences in exposure to chronic stressors. Model 1 in each table illustrates the effects of education, housing tenure, household income, and the three social roles (marital status, parental status and employment). Model 2 (for self-rated ill-health and distress only) includes reports of one or more long-standing health conditions and, therefore, to some extent, controls for health selection into socioeconomic position and social roles. Finally, Model 3 examines the extent to which chronic stress explains the effects of structural positions on the three health outcomes. Any change in the magnitudes of the Model 2 parameter estimates would support a role for chronic stress in understanding this relationship.

### 6.2.1. Self-rated ill-health

The partially-adjusted effects of the socioeconomic variables on selfrated ill-health confirm the health disadvantage of women living in rental housing and those with lower education and household income (Table 3, Model 1). Paid work was negatively associated with this outcome, but part-time work conferred no additional health benefit (or harm). Marital and parental status had no effects on perceived ill-health when measures of socioeconomic position were included in the model.

The attenuation of the coefficient for being employed when longstanding health conditions was included (Model 2) suggests that health selection may be operating; that is, the health-enhancing effects of paid work arise, in part, because less healthy women are being selected out of jobs, perhaps because they find it difficult to keep or obtain jobs. Chronic stress arising from social life, financial, and environment concerns, worries about children, and job strain were positively related to women's selfratings of ill-health (Model 3). Moreover, the magnitudes of the income and education coefficients were reduced with these additions to the model. Further investigation (results not shown) indicated that the income effect on ill-health was partly mediated by concerns about finances.

Table 3
Unstandardized coefficients for regression of self-rated ill-health on age, socioeconomic position, social roles, long-standing health conditions, and chronic stressors for women, NPHS, Canada, 1994

|  | Model 1 |  | Model 2 |  | Model 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $b$ | (s.e.) | $b$ | (s.e.) | $b$ | (s.e.) |
| Age | 0.01** | (0.00) | 0.01** | (0.00) | 0.01** | (0.00) |
| Education (Ref=Post-secondary degree/diploma) |  |  |  |  |  |  |
| < Secondary school diploma | 0.32** | (0.05) | 0.30** | (0.05) | 0.23** | (0.05) |
| Secondary school diploma | 0.12* | (0.05) | 0.15** | (0.05) | 0.10* | (0.04) |
| Some post-secondary school | 0.08 | (0.04) | 0.05 | (0.04) | 0.02 | (0.04) |
| Housing tenure (Ref=Homeowner) |  |  |  |  |  |  |
| Nonowner | 0.10* | (0.04) | 0.07 | (0.04) | 0.04 | (0.04) |
| Household income (Ref=High income) |  |  |  |  |  |  |
| Low | 0.46** | (0.09) | 0.46** | (0.08) | 0.40** | (0.08) |
| Low middle | 0.39** | (0.07) | 0.40** | (0.07) | 0.33** | (0.07) |
| Middle | 0.31** | (0.05) | 0.31** | (0.05) | $0.28 * *$ | (0.05) |
| Upper middle | 0.15** | (0.05) | 0.16** | (0.05) | 0.16** | (0.05) |
| Employment status |  |  |  |  |  |  |
| Employed (Ref=Nonemployed) | -0.23** | (0.05) | -0.18** | (0.05) | $-0.24 * *$ | (0.05) |
| Empl. full-time (Ref=Part-time) | 0.00 | (0.05) | 0.01 | (0.05) | 0.00 | (0.05) |
| Marital status (Ref=Married/common-law) |  |  |  |  |  |  |
| Formerly married | -0.03 | (0.05) | -0.09 | (0.05) | $-0.14 * *$ | (0.05) |
| Never married | 0.02 | (0.06) | 0.04 | (0.06) | 0.02 | (0.06) |
| Parental status (Ref=Nonparent) |  |  |  |  |  |  |
| Parent living with children | 0.02 | (0.05) | 0.04 | (0.05) | -0.08 | (0.05) |
| Parent not living with children | 0.09 | (0.07) | 0.05 | (0.06) | -0.05 | (0.06) |
| One or more long-standing health conditions |  |  | 0.64** | (0.03) | 0.56** | (0.03) |
| Chronic stressors |  |  |  |  |  |  |
| Social life stress |  |  |  |  | 0.12** | (0.01) |
| Financial stress |  |  |  |  | 0.09** | (0.03) |
| Relationship stress |  |  |  |  | 0.07 | (0.04) |
| Child stress |  |  |  |  | 0.13** | (0.02) |
| Environment stress |  |  |  |  | 0.07* | (0.03) |
| Family health stress |  |  |  |  | 0.02 | (0.03) |
| Job strain |  |  |  |  | 0.15** | (0.04) |
| Adjusted R-square |  |  |  |  |  |  |
| $N$ |  |  |  |  |  |  |

${ }^{*} \mathrm{p}<0.05 ;{ }^{* *} \mathrm{p}<0.01$.

Although it was more difficult to isolate the specific pathway(s) linking education to self-assessed ill-health, greater exposure to job strain among the less-educated was a factor. Controlling for job strain also led to an increase in the health protective effect of being employed. This suggests that were it not for the stress they experience at work, employed women would be in even better health than their nonemployed counterparts. Surprisingly, formerly married women reported significantly lower ill-health than married women.

### 6.2.2. Distress

The age-adjusted effects of socioeconomic position on distress illustrate several disadvantaged groups (Table 4, Model 1). In comparison with their counterparts with post-secondary credentials, women lacking a secondary school diploma reported higher levels of distress. The mental health of women living in rental accommodation was poorer than that of those in owner-occupied housing, and women who lived in low or lowmiddle income households were also worse off than women from the wealthiest households. Being employed lowered distress scores, as did working part-time (compared with full-time work), although the latter estimate did not reach statistical significance. This time, the formerly married experienced much poorer health than their married counterparts, but there was no statistically significant difference between the latter group and never-married women. Controlling for the presence of chronic health conditions (Model 2) had little effect on the household income coefficients, but resulted in a modest reduction in the effects of education (the lowest education level only), housing tenure, employment, and marital status (the formerly married estimate only).

Except for job strain, all sources of chronic stress were significantly and positively related to women's levels of distress (Model 3). Moreover, the effects of socioeconomic position and marital and parental status were clearly mediated by the chronic stress that these social locations imply. For example, education and housing tenure effects were rendered nonsignificant, while the coefficients for the two lowest household income groups were reduced by roughly one third. Additional investigation (results not shown) implicated financial stress in the income-distress relationship and environmental stress in that involving housing tenure and distress. Nevertheless, the persistence of income differences suggests that financial worries do not account for all the excess distress of women living in poor households.

Table 4
Unstandardized coefficients for regression of distress on age, socioeconomic position, social roles, long-standing health conditions, and chronic stressors for women, NPHS, Canada, 1994

|  | Model 1 |  | Model 2 |  | Model 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $b$ | (s.e.) | $b$ | (s.e.) | $b$ | (s.e.) |
| Age | -0.04** | (0.01) | $-0.05^{* *}$ | (0.01) | $-0.03 * *$ | (0.01) |
| Education (Ref=Post-secondary degree/diploma) |  |  |  |  |  |  |
| < Secondary school diploma | 0.53** | (0.19) | 0.49** | (0.18) | 0.16 | (0.17) |
| Secondary school diploma | 0.28 | (0.18) | 0.32 | (0.18) | 0.09 | (0.16) |
| Some post-secondary school | 0.31 | (0.16) | 0.24 | (0.16) | 0.06 | (0.15) |
| Housing tenure |  |  |  |  |  |  |
| (Ref=Homeowner) <br> Nonowner | 0.46** | (0.16) | 0.40** | (0.15) | 0.17 | (0.14) |
| Household income (Ref=High income) |  |  |  |  |  |  |
| Low | 0.98** | (0.33) | 0.98** | (0.32) | 0.70* | (0.30) |
| Low middle | 1.19** | (0.28) | 1.21** | (0.27) | 0.80** | (0.25) |
| Middle | 0.23 | (0.20) | 0.23 | (0.20) | 0.15 | (0.18) |
| Upper middle | 0.02 | (0.18) | 0.04 | (0.18) | 0.07 | (0.17) |
| Employment status |  |  |  |  |  |  |
| Employed (Ref=Nonemployed) | -0.59** | (0.19) | -0.49** | (0.19) | -0.61** | (0.18) |
| Empl. full-time (Ref=Part-time) | -0.22 | (0.18) | -0.19 | (0.18) | -0.28 | (0.16) |
| Marital status (Ref=Married/ common-law) |  |  |  |  |  |  |
| Formerly married | 0.88** | (0.19) | 0.74** | (0.19) | 0.48** | (0.18) |
| Never married | 0.25 | (0.23) | 0.28 | (0.23) | 0.16 | (0.21) |
| Parental status (Ref=Nonparent) |  |  |  |  |  |  |
| Parent living with children | -0.20 | (0.19) | -0.16 | (0.19) | -0.80** | (0.17) |
| Parent not living with children | 0.08 | (0.26) | -0.01 | (0.25) | -0.44 | (0.23) |
| One or more long-standing health conditions |  |  | 1.26** | (0.13) | 0.74** | (0.12) |
| Chronic stressors |  |  |  |  |  |  |
| Social life stress |  |  |  |  | 0.83** | (0.05) |
| Financial stress |  |  |  |  | 0.38** | (0.12) |
| Relationship stress |  |  |  |  | 0.65** | (0.14) |
| Child stress |  |  |  |  | 0.42** | (0.09) |
| Environment stress |  |  |  |  | 0.69** | (0.10) |
| Family health stress |  |  |  |  | 0.36** | (0.11) |
| Job strain |  |  |  |  | 0.12 | (0.16) |
| Adjusted R-square |  |  |  |  |  |  |
| $N$ |  |  |  |  |  |  |

${ }^{*}<0.05 ; * * \mathrm{p}<0.01$.

Once again, controlling for chronic stress increased the magnitude of the employment coefficient. Additional analyses not shown here suggested that if it were not for their greater social life and child-related stress, employed women would experience even less distress than their nonemployed counterparts. Avison (1995) reported similar findings in a sample of mothers living in a Canadian city once he controlled for the higher levels of ongoing caregiver and work-home strain reported by employed women. Adjusting for chronic stress reduced, but did not eliminate, differences in distress between formerly and currently married women. Although the interconnectedness of the stressors made the task of isolating key mediators of the marital status effect difficult, financial and relationship stress were implicated in pathways linking marital status to distress in analyses not shown here.

Interestingly, the addition of chronic stress also strengthened the health-protective effect of being a parent living with children. Compared with nonparents, these women experienced less distress, but this only became evident after their apparently higher levels of stress arising from social life and child concerns were taken into consideration. A similar pattern was observed among women no longer living with children, although the difference in distress between them and nonparents was not statistically significant.

### 6.2.3. Long-standing health conditions

Long-standing health conditions were influenced by disadvantaged socioeconomic positions, including having limited post-secondary education and living in rental housing (Table 5, Model 1). Employed women were 25 percent less likely to report long-standing health conditions, while formerly married women were 39 percent more likely than their married counterparts to do so.

Increasing social life, financial, and environment stress and worries about children and family health were associated with a higher likelihood of reporting long-standing health conditions (Model 2). Moreover, education and housing tenure effects were rendered nonsignificant with the addition of these persistent stressors. In other models not shown here, it was determined that the health disadvantage of women with noncredentialled post-secondary education was accounted for by their greater social life stress. Problems with residential neighbourhood acted similarly for women living in rental housing.

Table 5
Odds ratios for regression of long-standing health conditions on age, socioeconomic position, social roles, and chronic stressors for women,

NPHS, Canada, 1994

|  | Model 1 |  | Model 2 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | OR | (95\% CI) | OR | (95\% CI) |
| Age | 1.04* | (1.03-1.05) | 1.05* | (1.04-1.06) |
| Education (Ref=Post-secondary degree/ diploma) |  |  |  |  |
| < Secondary school diploma | 1.21 | (0.98-1.50) | 1.13 | (0.91-1.40) |
| Secondary school diploma | 0.89 | (0.71-1.12) | 0.87 | (0.69-1.09) |
| Some post-secondary school | 1.23* | (1.01-1.49) | 1.17 | (0.97-1.43) |
| Housing tenure (Ref=Homeowner) <br> Nonowner | 1.27* | (1.05-1.52) | 1.16 | (0.96-1.40) |
| Household income (Ref=High income) |  |  |  |  |
| Low | 1.24 | (0.86-1.80) | 1.08 | (0.73-1.59) |
| Low middle | 1.08 | (0.78-1.50) | 0.91 | (0.65-1.28) |
| Middle | 1.02 | (0.79-1.32) | 0.97 | (0.75-1.26) |
| Upper middle | 0.99 | (0.79-1.25) | 0.98 | (0.77-1.25) |
| Employment status |  |  |  |  |
| Employed (Ref=Nonemployed) | 0.75* | (0.60-0.95) | 0.75* | (0.59-0.96) |
| Empl. full-time (Ref=Part-time) | 0.95 | (0.76-1.18) | 0.94 | (0.75-1.18) |
| Marital status (Ref=Married/commonlaw) |  |  |  |  |
| Formerly married | 1.39* | (1.13-1.70) | 1.27* | (1.03-1.57) |
| Never married | 0.99 | (0.76-1.29) | 0.95 | (0.73-1.25) |
| Parental status (Ref=Nonparent) |  |  |  |  |
| Parent living with children | 0.92 | (0.74-1.14) | 0.77* | (0.61-0.97) |
| Parent not living with children | 1.14 | (0.86-1.51) | 0.97 | (0.73-1.30) |
| Chronic stressors |  |  |  |  |
| Social life stress |  |  | 1.18* | (1.10-1.26) |
| Financial stress |  |  | 1.30* | (1.10-1.54) |
| Relationship stress |  |  | 0.98 | (0.82-1.17) |
| Child stress |  |  | 1.19* | (1.05-1.34) |
| Environment stress |  |  | 1.22* | (1.07-1.39) |
| Family health stress |  |  | 1.30* | (1.13-1.49) |
| Job strain |  |  | 1.07 | (0.86-1.33) |
| Adjusted R-square |  | 0.08 |  | 0.12 |
| $N$ |  | 5,411 |  | 5,411 |

*p $<0.05 ; * * \mathrm{p}<0.01$.

Exposure to long-term stress helped us understand some of the relationship between social roles and long-term health, but their persistent effects suggest that other unidentified pathways are important. The magnitude of the odds ratio for being formerly married was reduced, partly because of the greater financial stress of this group compared with that of the married, but other stressors also played a role (analysis not shown here). As was the case for the other health outcomes, the healthprotective effect of being a parent living with children was enhanced once their greater exposure to child stress was taken into account (analysis not shown here).

To summarize, greater exposure to financial and environment stress, and in a more limited way, to social life stress and job strain accounted for some of the socioeconomic differences in women's health. In stark contrast, the chronic stressors examined here appear to be largely irrelevant to the pathways linking social roles to health. Rather than accounting for the generally poorer health of the nonemployed and mothers no longer living with their children, controlling for persistent stress enhanced the health benefits of their more "advantaged" counterparts. In other words, employed women and mothers living with their children experienced better health despite their greater chronic stress.

### 6.3. Differential vulnerability?

Our final series of models tested the vulnerability hypothesis. We assessed whether the impact of chronic stress on health depended on social position by examining first-order cross-product interaction terms involving chronic stressors and each measure of socioeconomic position, and chronic stressors and each social role. In all cases, we found that the main effects model was an adequate representation of the relationships. Hence, in this sample, chronic stress did not operate in ways that systematically rendered women in certain social locations more vulnerable to the health effects of stressful experiences than women in others (results not shown). These findings are consistent with recent work by Stronks et al. (1998) who found that the impact of chronic stress and life events on perceived health did not depend on education level.

## 7. Discussion

This paper set out to describe and account for the social patterning of women's health in Canada. Specifically, we were interested in assessing differences in self-rated ill-health, distress, and long-standing health conditions by socioeconomic position and social roles, and then examining whether these patterns arose from ongoing and difficult life circumstances rooted in these structural contexts. Socioeconomic position was inversely related to ill-health, and limited evidence suggested that those who were particularly disadvantaged in education and household income were considerably worse off than others.

With the exception of self-rated ill-health, the formerly married experienced poorer health than other women, while no differences were found between the currently and never married. These results support those of other studies that have outlined the health disadvantages of marital break-up and widowhood. However, they also underscore the need to distinguish among the various constituencies that comprise the heterogenous category of the "nonmarried" (Arber, 1991; Elstad, 1996; Waldron et al., 1997). The same may be true for parental status. Parents still living with their children reported less distress and were less likely to report chronic health problems than nonparents, while the difference between nonparents and women whose children were no longer at home was less clear. However, because many of the latter group were older women whose children had left home, it may be that this parental status is a proxy for infirmity not captured by the tested model. Until this possibility can be further evaluated, it is difficult to interpret the health differences between the two groups of parents. Women in paid work fared better than their nonemployed counterparts, although some of this disparity was the result of poor health selecting women out of the labour force. Consistent with other studies, we found no differences in the health of part-time and full-time paid workers (Macran et al., 1996; Arber, 1997; but see Lahelma et al., this volume).

The ongoing stressors that distinguish individuals' experiences in varying social locations accounted for some of the health effects of social position. In particular, psychosocial stress in the workplace, limited economic resources, and concerns about residential neighbourhood helped us understand the poorer health of socioeconomically disadvantaged women. However, the persistence of education and income effects for perceived ill-health and distress suggests that the chronic stressors examined here do not adequately capture the full essence of persistent stressful
experiences arising from these social locations. Alternatively, the stress process itself may be of limited explanatory value for understanding the social patterning of women's health by socioeconomic position.

Indeed, this seems to be particularly the case for the relationship between social roles and health. Employed women reported better health than those not in the labour force, in spite of their bigher levels of social life and child stress and exposure to job strain. The same was true for women living with their children. They reported less distress and longterm health problems than nonparents, even though they experienced problems with their children and more social life stress.

Before discussing the implications of these findings for future research and social policy, we must acknowledge that methodological shortcomings could account for our results. For instance, the chronic stress items selected for the NPHS come from a larger, more comprehensive, validated instrument (see Turner et al., 1995) and it is not clear whether and how this shortened inventory may have affected our estimates. Our analysis was also confined to a limited number of health outcomes. Broadening it to encompass a wider range of health measures would give us more confidence in our current findings if the general patterns were repeated.

The cross-sectional nature of our data is also a study limitation. We assumed that chronic stress harms health, but it is also plausible that poor health leads to stressful experiences or increases the perception of chronic stress. Wheaton (1994) investigated this problem in his development of the chronic stress instrument used here. Although he detected reciprocal effects for most types of chronic stress, the impact of chronic stress on distress was persistent and unattenuated when compared to simpler models that assumed a unidirectional causation. Wheaton was also able to validate reports of chronic stress using a number of external referents. More recently, Stronks et al. (1998) confirmed the persistence of an effect of chronic stressors on perceived health after controlling for neuroticism. They found that respondents' tendencies to focus on the negative side of themselves and others that may underlie self-reports of both stressors and health complaints did not account for all of the observed relationship between stress and health. This work provides some support for our assumption of a causal direction running from chronic stress to poor health, but longitudinal measurement of chronic stressors and health outcomes would more adequately address this issue.

Measurement at only one point in time is also a problem for assessing the direction of effects in the relationships involving health and social
position. We attempted to address this by controlling for long-standing health conditions in models predicting self-rated ill-health and distress, but adjusting for prior or "initial" health status would clearly be a better method for ascertaining the contribution of health selection and social causation processes. Examining subsequent waves of the NPHS in future work will enable us to do so.

The increase in the health-enhancing effects of being employed and a parent living with children, once persistent stressors were controlled, suggests that the rewards of these social positions outweigh the various conflicts and demands that characterize them. Unfortunately, our limited data did not enable us to consider the qualities of social relationships that have been implicated in other work (Walters et al., 1997, 1998; Barnett, 1994), but this is clearly an area that cannot be ignored in our efforts to understand how social roles are linked to health. Future research should also consider women's experiences across the social positions that they occupy simultaneously. For example, in an analysis of longitudinal data, Waldron and colleagues found that employment enhanced physical health, but only among women who were not married, while marriage enhanced health only among the nonemployed (Waldron et al., 1998). Sample size restrictions limit such inquiry to some extent and become especially problematic if one wishes to examine the persistent stress experiences of socioeconomic position and multiple social roles taken together. Nevertheless, the costs and benefits of social roles may not be the same across all possible sub-groups of women and where possible, these distinctions should be investigated.

In a similar vein, we also need to better specify the experiences embedded in various socioeconomic positions. Popay and Bartley (1993) have contributed in a major way to this endeavour with their characterization of the material features of paid and unpaid work. Notably, they took account of numerous conditions and amenities in the home and paid workplaces, as well as in residential neighbourhoods, in an effort to understand the social patterning of health by social class (and by gender). Their characterization of the household environment included having no central heating, no indoor toilet or bath, no electricity, damp housing, insect-infested housing, and housing in poor external repair. Conditions and amenities in the local neighbourhood were measured by having no open space, no recreational facilities, no shops or health care services nearby, dirty streets, no space for children to play outside, and no playspace for school-aged children. While these indicators may not be appropriate for all national contexts, they are illustrative of the types of
experiences we need to consider in our efforts to understand the pathways linking socioeconomic position to health.

Although our results reveal ambiguities that can only be clarified through additional research, some of our findings reinforce what other researchers have already made abundantly clear. One of the most important is our evidence of the poor health of women with little education and low household income (see also, McDonough et al., 1997; Backlund et al., 1999; House et al., 1994). A second observation that our study reinforces is that paid work enhances women's health, despite certain "costs" that it entails in terms of additional stress. To the extent that growing income inequality (Gottschalk and Smeeding, 1997) expands the numbers of women in economically vulnerable groups and pervasive economic restructuring continues to throw women out of work, the findings forecast a worsening of the health of Canadian women. However, this scenario is not inevitable. Policy interventions, such as tax credits, raising the minimum wage, direct income supplementation (Duncan, 1996), increasing access to, and levels of, unemployment insurance benefits and child care, and reversing state withdrawal from job creation can make a difference. Our research, combined with that of many others, suggests that such initiatives should not be delayed.

Finally, in addition to pointing to specific policy areas, social science research, such as ours, can influence social change by affecting the ways in which policy makers and the public think about social conditions and health (Link and Phelan, 1995). The sociological study of stress suggests that interrelated levels of social structure, including social stratification, social institutions, and interpersonal relationships, shape the experiences of individuals; these experiences, in turn, may produce stress that harms health (Pearlin, 1989). By implication, policy focussed on individuallybased causative factors and interventions, such as personality traits and stress-reduction programs, will yield only disappointing results. Rather, we must continue our research to better understand the connections between health and the social and economic arrangements within which individuals' lives are embedded and, in so doing, contribute to collective efforts to transform these arrangements.

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## Appendix

The following designations illustrate the manner in which information on household income and household size were combined by Statistics Canada to produce five categories of income adequacy.

|  | Income | Household size |
| :--- | :--- | :--- |
| 1. Lowest income | $<\$ 10,000$ | $1-4$ persons |
|  | $<\$ 15,000$ | 5 or more persons |
| 2. Lower middle income | $\$ 10,000-\$ 14,999$ | 1 or 2 persons |
|  | $\$ 10,000-\$ 19,999$ | 3 or 4 persons |
|  | $\$ 15,000-\$ 29,999$ | 5 or more persons |
| 3. Middle income | $\$ 15,000-\$ 29,999$ | 1 or 2 persons |
|  | $\$ 20,000-\$ 39,999$ | 3 or 4 persons |
|  | $\$ 30,000-\$ 59,999$ | 5 or more persons |
| 4. Upper middle income | $\$ 30,000-\$ 59,999$ | 1 or 2 persons |
|  | $\$ 40,000-\$ 79,999$ | 3 or 4 persons |
|  | $\$ 60,000-\$ 79,999$ | 5 or more persons |
|  | $\$ 60,000$ or more | 1 or 2 persons |
|  | $\$ 80,000$ or more | 3 persons or more |

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# THE IMPORTANCE OF LOW CONTROL AT WORK AND HOME ON DEPRESSION AND ANXIETY: DO THESE EFFECTS VARY BY GENDER AND SOCIAL CLASS?* 

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#### Abstract

In this study we consider both a gender model, a model that focuses on the stress associated with social roles and conditions in the home environment, and a job model, which addresses the stressful characteristics of the work environment, to investigate patterns of women's and men's psychological morbidity across different social positions. Using data from the Whitehall II Study, a longitudinal study of British civil servants, we hypothesise that a lack of control in the home and work environments affects depression and anxiety differently for women and men and across three social class groups. Both women and men with low control either at work or at home had an increased risk of developing depression and anxiety. We did not find an interaction between low control at home and work. We did, however, find that the


[^28]risks associated with low control either at home or work were not evenly distributed across different social positions, measured by employment grade. Women in the lowest or middle employment grades who also reported low control at work or home were at most risk for depression and anxiety. Men in the middle grade with low work control were at risk for depression while those in the lowest grade were at risk for anxiety. Men in the middle and bighest grades, bowever, were at greatest risk for both outcomes if they reported low control at home. We conclude that, in addition to social roles and characteristics of the work environment, future investigations of gender inequalities in bealth incorporate variables associated with control at home and social position.

Keywords: Depression, Anxiety, Health inequalities, Gender inequalities, Control, Work, Home.

## Résumé

Dans cette étude, les auteurs examinent à la fois un «modèle du genre», axé sur le stress associé aux rôles sociaux et aux maladies dans l'environnement domestique, et un «modèle de l'emploi», qui porte sur les caractéristiques stressantes de l'environnement professionnel, afin d'analyser la morbidité psychologique respective des hommes et des femmes dans diverses situations sociales. Exploitant les données de l'enquête «Whitehall II», une étude longitudinale sur les fonctionnaires britanniques, ils font l'bypothèse qu'un manque de maîtrise sur l'environnement domestique et professionnel influe sur la dépression et l'angoisse de manière différente selon le sexe et la classe sociale. Les personnes des deux sexes qui manquent d'autonomie, soit au travail soit à la maison, ont un risque accru de dépression et d'angoisse. Les auteurs n'ont pas constaté d'effet d'interaction entre le manque d'autonomie à la maison et le manque d'autonomie au travail. Mais ils ont observé que les risques associés au manque de maîtrise sur son environnement, domestique ou professionnel, ne sont pas équitablement répartis entre les classes sociales (représentées par la position biérarchique au travail). Les femmes des échelons professionnels inférieurs ou intermédiaires qui se plaignent de manquer d'autonomie, au travail ou à la maison, sont les plus exposées au risque de dépression et d'angoisse. Les hommes des échelons professionnels intermédiaires qui ont peu d'autonomie au travail sont sujets à la dépression, alors que ceux des échelons inférieurs sont plutôt sujets à l'anxiété. Cependant, les hommes qui occupent une position professionnelle médiane ou supérieure sont davantage exposés à ces deux risques s'ils se plaignent de manquer d'autonomie à la maison. Les auteurs concluent qu'en plus des rôles sociaux et des caractéristiques de l'environnement professionnel, les futures recherches sur les inégalités de genre
en matière de santé doivent prendre en compte des variables associées à la maîtrise sur l'environnement domestique et à la position sociale.

Mots-clés : Dépression, Angoisse, Inégalités en matière de santé, Inégalités de genre, Maîtrise, Travail, Foyer.

## 1. Introduction

Numerous studies have shown that women experience higher rates of depression and anxiety than men (Aneshensel, 1992; Gove and Tudor, 1973; Kessler and McRae, 1981; Mirowsky and Ross, 1989). In spite of this evidence, researchers still do not fully understand the source of these differences. In this paper we use data from the Whitehall II Study, a longitudinal study of British civil servants, to investigate two possible factors that, separately or together, may lead to psychological strain and contribute to these different patterns of depression and anxiety: low control at work, and low control at home. Furthermore, we examine if control at work and home varies by social position in order to determine if certain groups of women or men with low control are at higher risk for depression and anxiety.

For this investigation we draw from two existing theoretical frameworks that examine the relationships among stressful characteristics and poor health outcomes and then create a model that incorporates potential stressors from work and home. We consider both a gender framework, that is, one that focuses on the stress associated with roles and stressful conditions in the home environment, as well as a job framework, which addresses the stressful characteristics in the work environment.

We expected control at home to contribute more to the risk for depression and anxiety in women and control at work to contribute more for men. We also believed that across levels of social position, measured by employment grade, we would find a gradient in risk and that job and home control would explain part of this pattern.

Following a review of the literature relating social position and control to psychological distress and an explanation of the different theories about the relationship among work, home, and health that helped inform and guide this investigation, we present our findings to
four research questions. First, does low control at work increase the risk of depression and anxiety equally for women and men? Second, does low control at home increase the risk of depression and anxiety equally for women and men? Third, is there an interaction between control at home and control at work that increases the risk for psychological distress? Fourth, do these effects vary by social position, and if so, do women and men in different social positions have a greater risk of depression or anxiety from low control at home or at work?

## 2. Background

Studies in industrialised countries have consistently shown an unequal distribution of mortality for both men and women across different social classes, with people at the lower end of the social hierarchy dying at a faster rate than those at the top (Townsend and Davidson, 1982; McDonough et al., 1999). Although the pattern is less clear, researchers have also found a social class gradient for psychological morbidity (Dohrenwend, 1990). Higher rates of emotional distress, pain, tiredness, and mental illness have been found in those with lower rather than higher social positions (Hunt et al., 1985), but for so-called minor psychiatric disorders (largely depression and anxiety) the evidence for a social gradient is less clear. Some studies have found higher rates among those with lower socio-economic status (Kessler, 1994; Bebbington et al., 1981; Hodiamont et al., 1987) while others (Hare and Shaw, 1965; Lin et al., 1989) have found no social class gradient.

Theorists have suggested that one explanation for the social gradient in rates of minor psychiatric disorders is that people in lower social positions are confronted with a disproportionate number of chronic stressors and negative life events and relatively few material and social resources (Kessler, 1994; Pearlin, 1989). Feminist scholars have advanced this theory, suggesting that, generally, women, with their lower position in society, are particularly at risk for psychologically morbid conditions (Hall et al., 1993). Employed women, however, may have more potential to improve their social position by accumulating more resources, securing more social support, achieving greater prestige, and gaining greater control and power within the family (Rosenfield, 1989), thus, lowering their rates of depression and anxiety. In support of this, studies have shown that during the 1950's to 1970's, as large numbers
of women moved into the waged labour market, the difference in women's and men's rates of psychological morbidity narrowed (Kessler and McRae, 1981; McLanahan and Glass, 1985). Similarly, when compared to housewives, employed women have lower mortality rates (Passannante and Nathanson, 1985), better perceived health status (Nathanson, 1980; Verbrugge, 1983), and lower rates of depression (Hall and Johnson, 1988). Yet studies that have taken into account the "second shift" (Hochschild, 1989), that is, the double burden of being employed and maintaining primary responsibilities for the family and home, have shown that employed women have similar or even higher rates of psychiatric symptoms than housewives (Haavio, 1986). Women who work full time, especially those in managerial and professional jobs (Bartley et al., 1992; Hall, 1992; Rosenfield, 1989; Walters et al., 1996), and who have dependent children (Arber et al., 1985; Hall, 1992) also report more ill-health and depressive symptoms than their part-time or childless counterparts. These findings suggest that for women who work full time and maintain the overall management of the home environment, there may be a threshold where the benefits of paid employment begin to reverse and become deleterious. It is unclear, however, what causes this reversal, if some women reach this threshold earlier than others, and if the same pattern holds for men who have greater responsibilities at home. Arber $(1991,1997)$ has suggested that in order to unravel this pattern, researchers need to understand the structural context in which women perform their paid and unpaid work and live out their social roles. In other words, to understand the impact of work and social roles on health, we must also take into consideration social position and the level of control over resources that certain positions in society afford women.

With Arber's advice in mind, we argue in this paper that the benefits of employment begin to reverse and become deleterious when women, especially those in lower social positions, find themselves lacking control over their work or home life. In the psychosocial work environment literature, numerous studies (described in more detail below) have shown the harmful health effects of low job control, particularly for men (Warr, 1990) and men in low social positions (Marmot et al., 1991), yet far fewer studies have investigated the possible main or mediating effects low control in the home environment has in relation to health outcomes (Walters et al., 1996; Schooler et al., 1983; Rosenfield, 1989; Lombardi and Ulbrich, 1997). More common, how-
ever, are investigations comparing the stressful characteristics of paid work and unpaid work done at home. These two types of work have a different historical and social context, but researchers often characterize them in similar terms: isolated, monotonous, and demanding activity, often with low status, that provides little control over the sources of stress (Ferree, 1990; Oakley, 1974; Kessler-Harris, 1976; Bird and Ross, 1993).

In this next section, we describe the different theoretical frameworks from which we draw to develop a model that incorporates elements from both the home and work environments.

## 3. Theoretical approaches

In order to describe the stressful circumstances that are often associated with depression and anxiety, researchers have commonly used a different theoretical framework for women than for men. The framework for women primarily focuses on the strain from social roles within the family where, it is thought, the antecedents for distress may be rooted, and secondarily, on strain from paid employment. For men, however, the framework is apt to examine only stressful characteristics of paid work. A more detailed explanation of these frameworks follows.

### 3.1. Gender framework

Theories about the effects of family, home, and work on psychological distress draw from a number of academic disciplines. In general, they attempt to explain the health effects associated with the struggle to balance home and job responsibilities by incorporating an understanding of women's experiences and opportunities, their position in society, place in the labour market, and roles at home and within the family. From some of the common theories come the following models.

### 3.1.1. The spillover model

The spillover model has been used to help explain how strain may result from the intersecting relationship from two separate work envi-
ronments, the paid ("work") and unpaid ("home"). It recognises that boundaries exist between work and home, yet it finds those boundaries permeable. Acknowledging that work and home often have stressful exposures in common, the model states that these exposures sometimes "spillover", or reciprocate, from one environment to another and eventually can lead to work/family conflict that results in negative health outcomes (Frone et al., 1996; Grzywacz and Marks, 2000; Wortman et al., 1991). Using spillover theory, one could hypothesise that feelings about consistently missing family events because of work, or being overwhelmed with demands from home while at work would cause poor health outcomes, such as depression and anxiety. In a longitudinal study of 267 employed parents who worked more than 20 hours a week, Frone (1997), for example, found that family to work spillover was related to depression and poor physical health while work to family spillover was more closely associated with negative health behaviours, such as heavy alcohol consumption. Interestingly, after controlling for spillover (both work to family and family to work), women and men's reports of depression, poor physical health or heavy alcohol use did not differ significantly.

### 3.1.2. The double exposure model

The double exposure (or double burden) model incorporates the principles of the spillover model, but it also recognises the uniqueness of each environment. Instead of focusing specifically on the crossover or interaction between work and home, the double exposure model suggests that exposure to stress occurs in both the home and work environment, with some exposures unique to each environment, and others common to both. If levels of total exposure (common and unique elements from both environments) are high, the risk for negative health outcomes increases (Hall, 1992; Lundberg et al., 1994). Hall (1992) used this approach to study exposures to stress from work and home and their combined effect on psychosomatic strain and found fundamental gender differences in "...the pattern of exposure to the stresses and the rewards of working and home life" (p. 253), and the relationship of this pattern to strain. In her study of 12,772 working Swedish men and women, the greatest odds for psychosomatic strain was for women who worked more than 20 hours a week, had high home stress (defined as the level of burden from household duties) and
low control on the job. Women were almost five times ( $\mathrm{OR}=4.85$ ) more likely to have psychosomatic strain under these conditions, while for men, these same factors seemed to be protective ( $\mathrm{OR}=0.25$ ).

### 3.1.3. Learning generalisation theory

Schooler and colleagues (1983) have developed a model of "housework" that is analogous to their model for paid employment. Briefly, they hypothesise that like waged work, the characteristics of housework, specifically the psychological and physical demands, routinisation, complexity, and level of responsibility, independence, and control associated with domestic work, shape people's psychological functioning. They propose that people engaged in housework that requires intellectual activity, diversity of tasks and authority over their work have better psychological functioning, while those participating in monotonous work, lacking cognitive challenge and control, have poorer psychological functioning. In a test of their model, Schooler et al. (1983) found that distress in women who were not employed was related to the frequency of having to do housework under time pressure or the frequency of being held responsible for things outside her control. Similar to the women not employed, distress among employed women was related to the frequency of situations in which a woman is held responsible for things outside of her control, and for employed men, the time pressure for doing housework. As expected, both employed women and housewives reported better psychological functioning if their household tasks were cognitively challenging and required independent judgement. This was not the case for men, however. Men's positive psychological functioning was associated more with the heaviness of physical labour, perhaps suggesting that men's and women's experiences of household work are defined differently, and therefore, affect psychological functioning differently.

### 3.1.4. Multiple role theory

Moen (1989), in a different approach to that of Schooler et al. (1983), describes three theoretical explanations of how multiple roles (e.g., employee, parent, spouse) may affect health: role enhancement, role strain, and the role context approach. Role enhancement theory posits that additional roles can lead to better health outcomes because
resources, support and prestige accompany every new role. On the other hand, the accumulation of roles can lead to role strain because with the increase in roles there comes additional demands and obligations that participation in each role requires - and such strain can be deleterious. Role context theory proposes that, in addition to the number of roles, the context and characteristics of each particular role are important factors in determining whether the role accumulation produces beneficial or negative health effects. In other words, role context theory emphasises not only the occupation of a role, but the specific characteristics of each role, the way in which it is performed and the value placed upon it by society and by the person. It acknowledges that the role of a parent, spouse, or caregiver may be significantly different than the role of an employee. Role context theory would hypothesise that psychological strain does not develop simply as a result of being employed and being a parent or spouse, but that the context of these roles (e.g., their conflict and compatibility) and their characteristics (e.g., their rewards, benefits, demands, and detriments) are the factors important to understanding the extent and nature of strain and other health outcomes.

### 3.2. Job stress framework

The dominant model used to conceptualise how stressful characteristics of the job can lead to psychological strain has been the job strain or demand/control model. Developed by Karasek and Theorell (Karasek, 1979; Karasek and Theorell, 1990), and modified by Johnson et al. (1989), this model posits that deleterious strain will occur when high psychological demands on the job (the pace, effort, and volume of work) coexist with low control over the work. Low control is described more specifically in this model as 'decision latitude', yet the terms are often used interchangeably in the job stress literature. For this study we use the term decision latitude when we discuss our investigation. Karasek and Theorell (1990) define decision latitude as a lack of authority to make decisions concerning the work (called decision authority) and the inability to use one's skills at work (called skill discretion). In theory, chronic exposure to job conditions that are high in demands and low in decision latitude can lead to psychological strain, strain that may manifest as depression or anxiety.

This model has been used in numerous studies to examine the relationship among job characteristics, psychological strain, and psychological and physical illnesses (Schnall et al., 1994; Stansfeld et al., 1995; Stansfeld et al., 1999). Many of these studies have used national, population-based databases, thus gaining stronger credibility for extrapolating their results to other populations (Alfredsson and Theorell, 1983; Johnson and Hall, 1988; Theorell et al., 1991). In many of the larger studies, decision latitude has been the key construct in the model. Empirical evidence strongly supports the construct of control as the theoretical basis for the model and its importance as a systematic function of social class (Johnson and Hall, 1995). In Schnall et al.'s (1994, p. 400) review of studies investigating the relationship between the job strain model and cardiovascular disease symptoms and events, for instance, 17 of 25 studies showed a significant main effect of job control on the cardiovascular outcomes, while only 8 of 23 studies showed a main effect of job demands and the outcome. In the Whitehall II Study, we have found that low decision authority and skill discretion predict future development of coronary heart disease for both men and women (Bosma et al., 1997). Likewise, both decision authority and skill discretion make powerful contributions to explaining employment grade differences in depression in men, but not women, and employment grade differences in well being for both men and women (Stansfeld et al., 1998).

In our investigation we take into consideration elements of all these models. We examine a parallel construct for each environment, control, measure the occupancy of important roles (employee, parent, spouse, and caregiver), and then attempt to understand the context and social structure in which these roles are performed and their impact on psychological health for women and men.

## 4. Methods

### 4.1. Data and sample

The Whitehall II project is a longitudinal cohort study examining the causes of morbidity and mortality differences across the social gradient. From 1985 to 1988, all civil servants between the ages of 35-55 who worked for one of twenty London-based government civil service

Table 1
Demographic variables by gender and employment grade at Phase 3

|  | Men |  |  |  | Women |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { High } \\ \text { grade } \\ (n=2,466) \\ \% \end{gathered}$ | $\begin{gathered} \text { Medium } \\ \text { grade } \\ (n=2,343) \\ \% \end{gathered}$ | $\begin{gathered} \text { Low } \\ \text { grade } \\ (n=357) \\ \% \end{gathered}$ | $p$-value* | $\begin{gathered} \text { High } \\ \text { grade } \\ (n=376) \\ \% \end{gathered}$ | $\begin{gathered} \text { Medium } \\ \text { grade } \\ (n=1,031) \\ \% \end{gathered}$ | $\begin{gathered} \text { Low } \\ \text { grade } \\ (n=896) \\ \% \end{gathered}$ | $p$-value* |
| Marital status Married | 89.6 | 77.7 | 59.0 | <0.01 | 64.9 | 61.2 | 67.2 | 0.13 |
| Age group |  |  |  |  |  |  |  |  |
| 39-44 | 25.8 | 34.7 | 29.4 | <0.01 | 37.5 | 29.9 | 13.2 | $<0.01$ |
| 45-49 | 31.6 | 30.9 | 21.3 |  | 31.9 | 26.7 | 24.3 |  |
| 50-54 | 22.7 | 17.3 | 21.3 |  | 19.4 | 21.9 | 25.3 |  |
| 55-64 | 19.9 | 17.1 | 28.0 |  | 11.2 | 21.5 | 37.2 |  |
| Number of children |  |  |  |  |  |  |  |  |
| No children | 17.8 | 32.2 | 48.5 | $<0.01$ | 61.2 | 53.2 | 23.6 | $<0.01$ |
| One child | 10.2 | 12.4 | 8.7 |  | 12.2 | 16.7 | 13.4 |  |
| Two children | 45.5 | 37.2 | 23.1 |  | 20.2 | 19.9 | 35.0 |  |
| Three or more children | 26.4 | 18.2 | 19.7 |  | 6.4 | 10.2 | 28.1 |  |
| Caregiving status Caregiver | 8.9 | 10 | 8.1 | 0.62 | 13.3 | 14.4 | 12.7 | 0.57 |

* Differences in proportions tested using likelihood-ratio chi-square.
departments were sent introductory letters and questionnaires that included information on demographics, work characteristics, and physical and mental health. The overall response rate was $73 \%$ ( $71 \%$ for women and $74 \%$ for men). The true response rates, however, were likely higher because approximately four percent of those on this list of employees had, in fact, moved before the study and, thus, were not eligible for inclusion. In all, 10,308 workers $-6,895$ men ( $67 \%$ ) and 3,413 women ( $33 \%$ ) - agreed to participate. Since the initial baseline phase, this cohort has participated in 4 additional phases of data collection. In Phases 2 (1989-90) and 4 (1995-96), participants completed postal questionnaires; in Phases 3 (1991-93) and 5 (1997-99) they answered questionnaires and underwent additional screening examinations.

Data collected in Phases 3 and 5 were used in this investigation. Unless noted otherwise, we used the demographic, social position, decision latitude, control at home and social roles variables from Phase 3 and depression and anxiety data from Phase 5. At Phase 3, $81 \%$ of the original cohort ( 8,318 , total; 5,739 men, 2,579 women) completed the postal questionnaire, while in Phase 5, $71 \%$ ( 7,270 , total; 5,091 men, 2,179 women) completed the survey. The length of follow up between Phase 3 and Phase 5 was, on average, 5 years. Participants who had retired from paid work by Phase 3 or did not have complete data were not included in these analyses. Of the remaining 7,473 participants from Phase 3, $69 \%(n=5,170)$ were men and $31 \%(n=2,303)$ were women. Additional demographic characteristics are found in Table 1.

### 4.2. Measures

### 4.2.1. Social position

Social position was determined by employment grade within the civil service. Participants' report of their current grade during Phase 3 was used in these analyses. Explanations on how civil service grades are established are reported elsewhere (Marmot et al., 1991). Approximately $38 \%$ were classified in the administrative (high) grades, $45 \%$ professional/executive (middle) grades, and $17 \%$ worked in the cleri$\mathrm{cal} /$ support (low) grades. Proportionally more men than women worked in higher-grade jobs ( $48 \%$ versus $16 \%$ ), while more women
worked in lower-grade jobs ( $39 \%$ versus $7 \%$ ). The same proportion of women and men ( $45 \%$ ) worked in the middle grade.

### 4.2.2. Job and home factors

Statements from the Phase 3 questionnaire were used to measure decision latitude and control at home. For control at home, participants responded to the following statement using one of 6 response categories (disagree strongly, disagree moderately, disagree slightly, agree slightly, agree moderately, agree strongly): At home, I feel I have control over what happens in most situations. Responses were recoded into a dichotomous variable (disagree/agree) and labelled low control ('disagree') and high control ('agree'). Low control was coded as 1, high control as 0 .

Respondents also answered a series of 15 statements regarding decision latitude based on Job Content Questionnaire of Karasek et al. (1985). This scale consists of two sub-scales: decision authority, with 9 items; and, skill discretion, with 6 items. Responses for these questions were 'often', 'sometimes', 'seldom', 'never/almost never' and scored from one to four. Answers were summed and then recoded into a dichotomous variable (high $=0$, low $=1$ ). Because the median was significantly different for women and men, gender-specific cut points were used to create the dichotomous variable.

Data concerning full-time versus part-time employment status were not collected at Phase 3, but were collected at Phase 5. Instead of simply using employment status at Phase 5 as a proxy for Phase 3 status in all of the analyses, however, we first examined how full- and part-time workers differed, then repeated our multivariate analyses to test for the effect of employment status on depression and anxiety and compared those results to our main findings. Approximately $13 \%$ of participants with data at Phase 5 reported they worked less than 30 hours per week. Of those $13 \%, 9 \%$ were men and $4 \%$ were women. The proportion of women working part-time was relatively even across the three employment grades, but men working part-time were most likely to be working in the highest level of the civil service. The majority of women and men part-timers were older than 50 years, suggesting that these people were beginning a transition into retirement. Including employment status did not alter our main multivariate findings; therefore, we do not report these data.

At Phase 3 we asked participants about marital status, if they were providing any personal care or help to an aged or disabled relative, and the number of children they had. We coded marital and caregiving status as dichotomous variables ( $1=$ unmarried, $1=$ caregiver ) and number of children as a categorical variable $(0=$ no children to $3=3$ or more children).

### 4.2.3. Psychological morbidity

Psychological morbidity was measured at both Phases 3 and 5 using the 30 -item General Health Questionnaire (GHQ) (Goldberg, 1972) which has been validated against the Clinical Interview Schedule in a study sub-sample (Stansfeld and Marmot, 1992). The GHQ is a well-established screening questionnaire for minor psychiatric disorder suitable for use in general and clinic population samples.

For this investigation we were interested in the more specific psychopathology of depression and anxiety rather than in general psychiatric disorders, and therefore, we used two sub-scales of the 30 -item GHQ. Researchers have repeatedly tested the validity and reliability of depression and anxiety sub-scales from the 28 -item GHQ, a shorter GHQ scale with additional questions regarding depression and anxiety (Goldberg and Hillier, 1978). We selected the items from the 30 -item questionnaire that were also present in the depression and anxiety subscales of the scaled 28 -item GHQ (Stansfeld et al., 1995). We chose four items for depression and five items for anxiety and analysed their internal consistency and principal components structure. The depression and anxiety sub-scales had alpha coefficients of 0.88 and 0.86 , respectively. In principal components analysis of the $30-\mathrm{item} \mathrm{GHQ}$, we found five factors with eigenvalues greater than one after the items were rotated. The four items we chose for the depression sub-scale loaded on a single component for both women and men. All but one of the five items from the anxiety sub-scale also loaded on one factor for women and men.

Depression items were as follows: 'Have you recently: 1) been thinking of yourself as a worthless person; 2) felt that life is entirely hopeless; 3) felt that life isn't worth living; 4) found at times you couldn't do anything because your nerves were too bad?'

Anxiety items were as follows: 'Have you recently: 1) lost much sleep over worry; 2) felt constantly under strain; 3) been getting scared
or panicky for no good reason; 4) found everything getting on top of you; 5) been feeling nervous and strung up all the time?'

Responses for depression and anxiety items were 'not at all', 'no more than usual', 'rather more than usual', and 'much more than usual'. All items were scored on a Likert scale from 0 to 3 and then summed. We created a dichotomous variable for case status, using the top quartile for cases and the remainder as non-cases.

### 4.3. Procedures

In our bivariate analyses, we examined the distribution of demographic and social role variables, GHQ mean scores, percentage of GHQ cases, depression cases, and anxiety cases, and the percentage of those reporting high and low control by gender and employment grade.

For the multivariate analyses, separate analyses were conducted for women and men. Adjusting for age and employment grade, we used hierarchical logistic regression models to examine the relationship among job control, home control, and caseness for each of the outcomes (depression and anxiety). We used this approach in order to examine the independent effects of decision latitude and control at home on depression and anxiety, but also to determine if employment grade varied when there was low control. Moreover, we were interested in how the addition of social roles to the models might alter these relationships.

We used four steps to build the models. For Step 1, age and employment grade were fit. Decision latitude and home control were added in Steps 2 and 3. To address our first question - does low decision latitude increase the risk of depression and anxiety equally for women and men - we first fit decision latitude in Step 2 and then fit home control to determine if it altered the main effect decision latitude had on the outcomes. To address our second question - does low control at home increase the risk of depression and anxiety equally for women and men - we fit home control in Step 2 and then fit decision latitude in Step 3. Lastly, we included number of children, marital status, and caregiving status in Step 4 to see the effect of additional domestic roles on the outcomes. We then examined an identical set of models, but added an interaction term of decision latitude by home control. In order to remove the potential confounding effect of caseness at Phase 3, results from the hierarchical analyses were confirmed
both by repeating the analyses adjusting for Phase 3 caseness, as well as by excluding Phase 3 cases. As both approaches gave comparable results, only the latter are reported in the tables. Non-cases at Phase 3 were defined in the same way as at Phase 5: all those with summed GHQ scores not in the top quartile.

Finally, to determine who had the highest risk for depression and anxiety given their level of control on the job and at home, we stratified the sample by grade and gender. We then compared women and men's risk for depression and anxiety from home control and decision latitude by employment grade.

## 5. Results

In the unadjusted bivariate analyses of demographic and social role variables, men were significantly more likely to be married, younger, and have more children than women. As shown in Table 1, nearly $90 \%$ of men in the highest grade were married compared to only $65 \%$ of women in the same employment grade. For men we found a gradient in marital status, with men in the highest grade the most likely to be married $(89.6 \%)$ and men in the lowest grade the least likely $(59 \%)$. We did not find the same pattern among women; instead, the proportion of married women across the three employment grades was relatively even. The number of children participants reported having also varied by gender. Women in the highest and middle grades were more likely than men in the same grades not to have any children. Over half of the women in the high and middle grades reported not having any children, compared to $18 \%$ of men in the high and $32 \%$ in the middle grade. Conversely, nearly $50 \%$ of men in the lowest grade did not have children, compared to only $24 \%$ of the women in the same grade. Women were more likely than men to care for older relatives, but neither men nor women in any particular employment grade were more likely to provide this care.

Consistent with findings from previous studies (Aneshensel, 1992; Gove and Tudor, 1973; Kessler and McRae, 1981; Mirowsky and Ross, 1989), women were significantly more likely than men to suffer from psychological ill health. More often than men, women were classified as a 'case' using the 30 -item GHQ and depression and anxiety sub-

Table 2
Psychological morbidity at Phase 5, and control on the job and at home by gender and employment grade at Phase 3

|  | High grade | Medium grade | Low grade | $p$-value |
| :--- | :---: | :---: | :---: | :---: |
| Men |  |  |  |  |
| GHQ mean (sd) | $2.69(4.98)$ | $3.11(5.62)$ | $3.38(6.20)$ | 0.02 |
| \% of GHQ cases ( $n$ ) | $20.0 \%$ | $21.2 \%$ | $21.5 \%$ | 0.35 |
|  | $(422 / 2110)$ | $(407 / 1922)$ | $(50 / 233)$ |  |
| \% of depression cases ( $n$ ) | $19.9 \%$ | $25.7 \%$ | $33.3 \%$ | $<0.01$ |
|  | $(419 / 2108)$ | $(492 / 1917)$ | $(78 / 234)$ |  |
| \% of anxiety cases ( $n$ ) | $15.7 \%$ | $19.3 \%$ | $22.6 \%$ | $<0.01$ |
|  | $(331 / 2107)$ | $(373 / 1928)$ | $(53 / 234)$ |  |
| \% low decision latitude ( $n$ ) | $31.5 \%$ | $64.3 \%$ | $93.6 \%$ | $<0.01$ |
| \% low home control $(n)$ | $(772 / 2449)$ | $(1494 / 2323)$ | $(324 / 346)$ |  |
|  | $13.5 \%$ | $10.8 \%$ | $12.4 \%$ | 0.03 |
|  | $(332 / 2463)$ | $(253 / 2340)$ | $(44 / 355)$ |  |
| Women |  |  |  |  |
| GHQ mean (sd) | $3.59(5.51)$ | $4.14(6.66)$ | $3.55(6.04)$ | 0.15 |
| \% of GHQ cases $(n)$ | $27.1 \%$ | $27.5 \%$ | $24.5 \%$ | 0.30 |
|  | $(90 / 332)$ | $(232 / 845)$ | $(150 / 611)$ |  |
| \% of depression cases $(n)$ | $25.5 \%$ | $27.9 \%$ | $30.3 \%$ | 0.12 |
| \% of anxiety cases $(n)$ | $(85 / 333)$ | $(235 / 842)$ | $(186 / 614)$ |  |
|  | $26.3 \%$ | $26.2 \%$ | $27.0 \%$ | 0.77 |
| \% low decision latitude $(n)$ | $(87 / 331)$ | $(222 / 848)$ | $(166 / 615)$ |  |
|  | $8.8 \%$ | $39.8 \%$ | $76.6 \%$ | $<0.01$ |
| \% low home control $(n)$ | $(32 / 362)$ | $(388 / 975)$ | $(657 / 858)$ |  |
|  | $8.5 \%$ | $7.8 \%$ | $9.2 \%$ | 0.50 |
|  | $(32 / 376)$ | $(80 / 1030)$ | $(82 / 893)$ |  |

a. Differences in means tested using the F-test. Differences in proportions tested using likelihood-ratio chi-square.
scales from Phase 5. Women and men did not differ by the amount of decision latitude that they reported, but men did report significantly less control at home. When we stratified by gender and employment grade, as seen in Table 2, a significantly greater proportion of men in the lower grades were classified as depression and anxiety cases and reported low decision latitude. More men in the highest grade, however, reported low control at home. Conversely, the proportion of women classified as GHQ cases or anxiety cases did not vary significantly by employment grade. We did, however, find a gradient in the
proportion of depression cases, with more women in the lower grades classified as depression cases, although the proportions were not significantly different. More women in the lowest grade reported low control at home, and as with the men, we found a strong gradient for decision latitude in women, with a greater proportion of those in the lowest grade reporting low control.

In Tables 3 through 6 , we address our main research questions. First, did low decision latitude at work increase the risk of depression and anxiety equally for women and men? As shown in Tables 3 and 4, after adjusting for age and employment grade, both women and men with low decision latitude had significantly higher odds for depression (for women, $\quad \mathrm{OR}=1.48, \quad \mathrm{CI}=1.15-1.89$; for men, $\quad \mathrm{OR}=1.53$, $\mathrm{CI}=1.31-1.80$ ) and anxiety (for women, $\mathrm{OR}=1.29, \mathrm{CI}=1.03-1.62$; for men, $\mathrm{OR}=1.43, \mathrm{CI}=1.20-1.70)$. Even after adjusting for home control (Step 3), marital status, number of children, and caregiving status (Step 4), women and men with low decision latitude had increased odds for depression and, for men, an increased risk for anxiety. The effect of low decision latitude was stronger for men than it was for women, particularly in relation to anxiety disorders.

For our second research question we asked: Did low control at home increase the risk of depression and anxiety equally for women and men? Our initial analyses, where we fit home control in Step 2 and decision latitude in Step 3, did not differ from the previous analysis where we first fit decision latitude and then home control. Given the comparable findings, we refer to the same tables used to address the previous question, Tables 3 and 4 .

After adjusting for age, grade, and decision latitude (Step 3), both women and men with low control at home had significantly higher odds of suffering from depression (for women, $\mathrm{OR}=2.51, \mathrm{CI}=1.77$ 3.56; for men, $\mathrm{OR}=1.86, \mathrm{CI}=1.52-2.28$ ) and anxiety (for women, $\mathrm{OR}=1.75, \mathrm{CI}=1.22-2.51$; for men, $\mathrm{OR}=1.89, \mathrm{CI}=1.52-2.35$ ) than those with high control. The effect of low control at home on depression was stronger for women than men, but for anxiety, the effect was slightly stronger for men.

The independent effects of decision latitude and control at home persisted after we re-examined the analyses, controlling for marital status, number of children and caregiving status (Step 4). Low control at home more than doubled the risk for depression ( $\mathrm{OR}=2.55$, $\mathrm{CI}=1.78-3.63$ ) and increased the risk by almost $70 \%$ for anxiety

Table 3
Gender-specific effects of employment grade, decision latitude and home control at Phase 3 on depression at Phase 5: OR ${ }^{a}$ and $95 \%$ CI

|  |  | Step 1 | Step 2 | Step 3 | Step 4 | Step 4 repeated, excluding Phase 3 depression cases |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Men | Age 39-44 (years) <br> 45-49 <br> 50-54 <br> 55-64 <br> Grade High <br> Middle <br> Low <br> Decision latitude ${ }^{d}$ <br> Home control ${ }^{d}$ <br> Marital status ${ }^{d}$ <br> Number of children ${ }^{d}$ <br> Caregiving status ${ }^{d}$ | 1.00 $0.85(0.71-1.02)$ $0.75(0.61-0.93)^{b}$ $0.59(0.48-0.74)^{b}$ 1.0 $1.35(1.16-1.57)^{b}$ $1.95(1.44-2.64)^{b}$ | 1.00 $0.86(0.72-1.03)$ $0.75(0.61-0.93)^{b}$ $0.59(0.48-0.74)^{b}$ 1.0 $1.17(1.00-1.38)^{c}$ $1.51(1.10-2.07)^{b}$ $1.53(1.31-1.80)^{b}$ | 1.00 $0.86(0.72-1.03)$ $0.77(0.62-0.95)^{b}$ $0.62(0.50-0.77)^{b}$ 1.0 $1.21(1.03-1.41)^{c}$ $1.52(1.11-2.09)^{b}$ $1.53(1.30-1.79)^{b}$ $1.86(1.52-2.28)^{b}$ | 1.00 $0.85(0.71-1.02)$ $0.77(0.62-0.96)^{c}$ $0.62(0.50-0.78)^{b}$ 1.0 $1.16(0.99-1.36)$ $1.39(1.01-1.93)^{c}$ $1.50(1.28-1.76)^{b}$ $1.92(1.57-2.36)^{b}$ $1.39(1.13-1.72)^{b}$ $1.00(0.93-1.08)$ $1.45(1.15-1.83)^{b}$ | 1.0 $0.79(0.61-1.03)$ $0.72(0.53-0.98)^{c}$ $0.71(0.52-0.96)^{c}$ 1.0 $1.17(0.93-1.48)$ $1.38(0.87-2.20)$ $1.15(0.92-1.44)$ $1.71(1.26-2.31)^{b}$ $1.29(0.94-1.76)$ $1.02(0.91-1.13)$ $1.59(1.16-2.18)^{b}$ |
| Women | Age 39-44 (years) <br> 45-49 <br> 50-54 <br> 55-64 <br> Grade High <br> Middle <br> Low <br> Decision latitude ${ }^{d}$ <br> Home control ${ }^{d}$ <br> Marital status ${ }^{d}$ <br> Number of children ${ }^{d}$ <br> Caregiving status ${ }^{d}$ | 1.0 $0.68(0.51-0.90)^{b}$ $0.53(0.39-0.73)^{b}$ $0.46(0.33-0.62)^{b}$ 1.0 $1.25(0.92-1.68)$ $1.54(1.12-2.12)^{b}$ | 1.0 $0.67(0.50-0.89)^{b}$ $0.52(0.38-0.70)^{b}$ $0.45(0.33-0.61)^{b}$ 1.0 $1.10(0.81-1.50)$ $1.18(0.82-1.70)$ $1.48(1.15-1.89)^{b}$ | 1.0 $0.67(0.50-0.90)^{b}$ $0.52(0.38-0.71)^{b}$ $0.45(0.33-0.61)^{b}$ 1.0 $1.11(0.81-1.52)$ $1.20(0.83-1.73)$ $1.44(1.12-1.85)^{b}$ $2.51(1.77-3.56)^{b}$ | 1.0 $0.67(0.50-0.90)^{b}$ $0.51(0.37-0.70)^{b}$ $0.44(0.32-0.61)^{b}$ 1.0 $1.11(0.81-1.52)$ $1.21(0.83-1.77)$ $1.43(1.11-1.83)^{b}$ $2.55(1.78-3.63)^{b}$ $1.13(0.89-1.43)$ $1.00(0.90-1.12)$ $1.04(0.76-1.42)$ | 1.0 $0.61(0.41-0.90)^{b}$ $0.48(0.31-0.74)^{b}$ $0.40(0.26-0.63)^{b}$ 1.0 $1.08(0.71-1.64)$ $1.10(0.65-1.85)$ $1.15(0.81-1.64)$ $2.02(1.12-3.64)^{c}$ $1.15(0.83-1.61)$ $1.04(0.90-1.21)$ $0.72(0.44-1.18)$ |

a. OR $=$ Odds ratio estimated by logistic regression. $\quad$ b. $p$-value $\leq 0.01$. $\quad$ c. $p$-value $\leq 0.05$.
d. marital status $(0=$ married, $1=$ unmarried $)$, number of children $(0=$ none $)$, caregiving status $(0=$ not a caregiver $)$, decision latitude $(0=$ high control), home control ( $0=$ high control).

Table 4
Gender-specific effects of employment grade, decision latitude and home control at Phase 3 on anxiety at Phase 5: OR ${ }^{a}$ and $95 \%$ CI

|  |  | Step 1 | Step 2 | Step 3 | Step 4 | Step 4 repeated, excluding Phase 3 anxiety cases |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Men | Age 39-44 (years) 45-49 <br> 50-54 <br> 55-64 <br> Grade High <br> Middle <br> Low <br> Decision latitude ${ }^{d}$ <br> Home control ${ }^{d}$ <br> Marital status ${ }^{d}$ <br> Number of children ${ }^{d}$ <br> Caregiving status ${ }^{d}$ | 1.0 $0.64(0.53-0.78)^{b}$ $0.50(0.39-0.63)^{b}$ $0.40(0.31-0.52)^{b}$ 1.0 $1.23(1.04-1.45)^{c}$ $1.55(1.10-2.18)^{c}$ | 1.0 $0.64(0.53-0.78)^{b}$ $0.50(0.39-0.63)^{b}$ $0.40(0.31-0.52)^{b}$ 1.0 $1.09(0.92-1.30)$ $1.26(0.88-1.79)$ $1.43(1.20-1.70)^{b}$ | 1.0 $0.64(0.53-0.78)^{b}$ $0.51(0.40-0.64)^{b}$ $0.42(0.33-0.54)^{b}$ 1.0 $1.12(0.94-1.34)$ $1.27(0.89-1.81)$ $1.42(1.20-1.70)^{b}$ $1.89(1.52-2.35)^{b}$ | 1.0 $0.62(0.51-0.75)^{b}$ $0.48(0.38-0.61)^{b}$ $0.40(0.31-0.51)^{b}$ 1.0 $1.12(0.93-1.34)$ $1.28(0.89-1.84)$ $1.43(1.19-1.70)^{b}$ $1.88(1.52-2.34)^{b}$ $1.05(0.82-1.33)$ $1.03(0.95-1.13)$ $1.72(1.34-2.21)^{b}$ | 1.0 $0.58(0.46-0.75)^{b}$ $0.49(0.36-0.66)^{b}$ $0.35(0.26-0.49)^{b}$ 1.0 $1.07(0.85-1.34))^{2}$ $1.15(0.73-1.82)^{b}$ $1.43(1.15-1.79)^{b}$ $1.68(1.25-2.24)^{b}$ $0.86(0.63-1.17)$ $0.97(0.87-1.07)$ $1.70(1.23-2.35)^{b}$ |
| Women | Age 39-44 (years) <br> 45-49 <br> 50-54 <br> 55-64 <br> Grade High <br> Middle <br> Low <br> Decision latitude ${ }^{d}$ <br> Home control ${ }^{d}$ <br> Marital status ${ }^{d}$ <br> Number of children ${ }^{d}$ <br> Caregiving status ${ }^{d}$ | 1.0 $0.74(0.55-0.98)^{c}$ $0.57(0.42-0.78)^{b}$ $0.40(0.29-0.56)^{b}$ 1.0 $1.10(0.82-1.49)$ $1.34(0.97-1.86)$ | 1.0 $0.73(0.55-0.97)^{c}$ $0.56(0.41-0.77)^{b}$ $0.40(0.29-0.56)^{b}$ 1.00 $1.02(0.75-1.39)$ $1.14(0.79-1.64)$ $1.28(1.00-1.65)^{c}$ | 1.0 $0.74(0.55-0.98)^{c}$ $0.57(0.41-0.78)^{b}$ $0.40(0.29-0.56)^{b}$ 1.0 $1.03(0.75-1.40)$ $1.15(0.80-1.65)$ $1.26(0.98-1.62)$ $1.75(1.22-2.51)^{b}$ | 1.0 $0.72(0.54-0.97)^{c}$ $0.56(0.41-0.76)^{b}$ $0.39(0.28-0.55)^{b}$ 1.00 $1.03(0.75-1.40)$ $1.12(0.77-1.63)$ $1.26(0.98-1.63)$ $1.69(1.18-2.43)^{b}$ $0.95(0.74-1.21)$ $1.04(0.93-1.16)$ $1.26(0.92-1.73)$ | 1.0 $0.69(0.48-1.00)^{c}$ $0.45(0.30-0.68)^{b}$ $0.37(0.24-0.57)^{b}$ 1.0 $0.92(0.61-1.38)$ $1.00(0.61-1.63)$ $1.20(0.86-1.67)$ $1.48(0.88-2.48)$ $0.97(0.71-1.34)$ $1.08(0.94-1.25)$ $1.01(0.65-1.56)$ |

d. marital status $(0=$ married, $1=$ unmarried $)$, number of children $(0=$ none $)$, caregiving status $(0=$ not a caregiver), decision latitude $(0=$ high control), home control ( $0=$ high control).
( $\mathrm{OR}=1.69, \mathrm{CI}=1.18-2.43$ ) among women. For men, the odds for depression $(\mathrm{OR}=1.92, \mathrm{CI}=1.57-2.36)$ and anxiety $(\mathrm{OR}=1.88$, $\mathrm{CI}=1.52-2.34)$ were also significantly higher than for those with high control at home. We found that none of the social roles we examined significantly altered the relationship between home control and the outcomes for women, but we did find, for men, that being a caregiver to a disabled or ageing relative was a risk factor for depression and anxiety. Unmarried men also had higher odds of being depressed.

To test the possibility that at Phase 3 depressed or anxious women or men were more likely to report low decision latitude, we repeated our analyses using only those who were not classified as 'cases' at Phase 3 and added these findings to the last column in Tables 3 and 4. Using the equation for Step 4 (adjusting for age, grade, home control, marital and caregiving status, and number of children), the odds for depression among men with low decision latitude decreased $66 \%$, while the odds for anxiety barely changed, increasing by $2 \%$. For women with low decision latitude, the elevated risks for depression and anxiety decreased, with the odds for depression dropping $61 \%$, and for anxiety, $22 \%$.

While the odds also decreased when we examined the effect of low control at home using only Phase 3 non-cases, the differential effect by gender remained constant. For men, the odds for depression from having low home control decreased $18 \%$ and in women they decreased $25 \%$. The odds for anxiety in men decreased $18 \%$, and for women, they decreased $26 \%$. In spite of the general decrease in odds after excluding Phase 3 cases and controlling for the effects of social position and other roles, control at home remained a significant risk factor for depression in women and men and for anxiety in men.

Our third research question was: Is there an interaction between control at home and control at work that increases the risk for psychological distress? An interaction term for job decision latitude by home control was included in each of the hierarchical models. None of the terms was significant or neared significance for men or women; therefore, these data are not presented here.

Our final question was: Do these effects vary by social position, and if so, do women and men in different social positions have a greater risk of depression or anxiety from low control at home or at work? To address this question we first examined the relationship be-
tween social position and each outcome and then considered how low control at home and work affected that relationship.

In Table 3, we found a gradient by employment grade in the risk for depression in men and women, although the odds were not always statistically significant. Women in the lowest grade had significantly higher odds of depression compared to those in the highest grade in Step 1, but after controlling for decision latitude in Step 2, the odds no longer reached a significant level. For men, the gradient was significant in Steps 1, 2, and 3, but after controlling for marital status, number of children, and caregiving status in Step 4, only the men in the lowest employment grade had significantly higher odds for depression than those in the highest grade. For both women and men, decision latitude explained a significant part of the gradient for depression. We also found a gradient by employment grade in the risk for anxiety for women and men, but after controlling for decision latitude, these differences were no longer significant.

Given the persistence of a gradient across the findings we were interested in determining if there was a gradient for control at home and work. In other words, we were interested in whether there was an increased risk for depression and anxiety for women or men in certain employment grades who had low home control and low decision latitude.

Using stratified analyses, shown in Table 5, we did not find a clear gradient for the effect of decision latitude or home control on depression in women or men. Instead we found that women and men in the middle employment grade with low decision latitude were at greatest risk for depression. Men in the middle grade also had greater odds for depression than men in other grades when there was low control at home, but it is important to note the strong and nearly significant effect low control at home had on men in the lowest grade ( $\mathrm{OR}=2.03$, CI $=0.92-4.47$ ), a group composed of far fewer men ( $n=225$ versus $n=1,900$ ). For women with low control at home, we found that those in the lowest employment grade had by far the highest odds ( $\mathrm{OR}=4.41, \mathrm{CI}=2.44-7.97$ ) of any grade of women or men.

As shown in Table 6, we did find a gradient across employment grades for the effect of decision latitude on anxiety disorders in men. Men in the lowest grade who reported low decision latitude were at greater risk than men or women in any other grade, although the odds ratio did not reach statistical significance $(\mathrm{OR}=2.62, \mathrm{CI}=0.52-13.26)$.

Table 5
Gender- and grade-specific effects of decision latitude and home control at Phase 3 on depression at Phase 5: OR ${ }^{a}$ and $95 \%$ CI

|  |  | High grade | Middle grade | Low grade |
| :---: | :---: | :---: | :---: | :---: |
| Men | Age 39-44 (years) | 1.0 | 1.0 | 1.0 |
|  | 45-49 | 0.93 (0.70-1.24) | 0.80 (0.62-1.04) | 0.77 (0.34-1.73) |
|  | 50-54 | 0.90 (0.66-1.23) | 0.69 (0.50-0.95) ${ }^{\text {c }}$ | 0.56 (0.24-1.33) |
|  | 55-64 | 0.74 (0.53-1.03) | $0.52(0.37-0.73)^{b}$ | 0.65 (0.31-1.35) |
|  | Decision latitude ${ }^{d}$ | 1.29 (1.03-1.62) ${ }^{\text {c }}$ | 1.76 (1.39-2.23) ${ }^{b}$ | 1.42 (0.42-4.79) |
|  | Home control ${ }^{d}$ | $1.71(1.28-2.29)^{b}$ | $2.22(1.63-3.03)^{b}$ | 2.03 (0.92-4.47) |
|  | Marital status ${ }^{d}$ | 1.33 (0.92-1.94) | 1.43 (1.08-1.90) ${ }^{b}$ | 1.40 (0.71-2.79) |
|  | Number of children ${ }^{d}$ | 0.98 (0.88-1.11) | 0.99 (0.89-1.11) | 1.19 (0.89-1.58) |
|  | Caregiving status ${ }^{\text {d }}$ | 1.49 (1.05-2.11) ${ }^{\text {c }}$ | 1.38 (0.99-1.32) | 1.71 (0.64-4.54) |
|  | $n$ | 2,087 | 1,900 | 225 |
| Women | Age 39-44 years | 1.0 | 1.0 |  |
|  | 45-49 | 0.56 (0.30-1.02) | 0.73 (0.49-1.10) | 0.64 (0.36-1.15) |
|  | 50-54 | $0.31(0.14-0.69)^{c}$ | $0.51(0.32-0.80)^{b}$ | 0.63 (0.35-1.13) |
|  | 55-64 | 0.41 (0.17-1.03) | $0.50(0.31-0.80)^{b}$ | $0.40(0.23-0.70)^{b}$ |
|  | Decision latitude ${ }^{d}$ | $1.12(0.44-2.87)$ | $1.60(1.16-2.21)^{b}$ | $1.27(0.81-1.97)$ |
|  | Home control ${ }^{d}$ | 1.81 (0.76-4.28) | $1.82(1.05-3.14)^{c}$ | 4.41 (2.44-7.97) ${ }^{b}$ |
|  | Marital status ${ }^{d}$ | 1.19 (0.66-2.13) | 1.08 (0.76-1.52) | 1.15 (0.77-1.74) |
|  | Number of children ${ }^{d}$ | 0.98 (0.74-1.30) | 0.99 (0.84-1.16) | 1.00 (0.84-1.19) |
|  | Caregiving status ${ }^{d}$ | 1.67 (0.82-3.41) | 1.10 (0.70-1.74) | 0.78 (0.44-1.38) |
|  | $n$ | 320 | 792 | 588 |

a. $\mathrm{OR}=$ Odds ratio estimated by logistic regression. $\quad b . p$-value $\leq 0.01 . \quad c . p$-value $\leq 0.05$.
d. marital status $(0=$ married, $1=$ unmarried $)$, number of children $(0=$ none $)$, caregiving status $(0=$ not a caregiver $)$, decision latitude $(0=$ high control $)$, home control $(0=$ high control $)$.

Table 6
Gender- and grade-specific effects of decision latitude and home control at Phase 3 on anxiety at Phase 5: OR ${ }^{a}$ and $95 \%$ CI

|  |  | High grade | Middle grade | Low grade |
| :---: | :---: | :---: | :---: | :---: |
| Men | Age 39-44 years | 1.0 | 1.0 | 1.0 |
|  | 45-49 | 0.61 (0.45-0.82) ${ }^{\text {b }}$ | 0.62 (0.47-0.82) ${ }^{\text {b }}$ | 0.55 (0.21-1.41) |
|  | 50-54 | 0.52 (0.37-0.73) ${ }^{\text {b }}$ | 0.48 (0.34-0.69) ${ }^{\text {b }}$ | 0.24 (0.07-0.79) ${ }^{\text {c }}$ |
|  | 55-64 | 0.38 (0.26-0.56) ${ }^{\text {b }}$ | $0.35(0.23-0.51)^{b}$ | 0.76 (0.35-1.68) |
|  | Decision latitude ${ }^{\text {d }}$ | 1.26 (0.98-1.63) | $1.58(1.22-2.04)^{b}$ | 2.62 (0.52-13.26) |
|  | Home control ${ }^{d}$ | 2.17 (1.60-2.94) ${ }^{\text {b }}$ | 1.86 (1.33-2.58) ${ }^{\text {b }}$ | 0.78 (0.27-2.25) |
|  | Marital status ${ }^{d}$ | 1.29 (0.85-1.96) | 0.96 (0.70-1.33) | 1.12 (0.50-2.50) |
|  | Number of children ${ }^{d}$ | 1.01 (0.89-1.15) | 1.03 (0.91-1.16) | 1.25 (0.90-1.73) |
|  | Caregiving status ${ }^{\text {d }}$ | 1.26 (0.83-1.90) | $2.00(1.41-2.82)^{b}$ | $3.59(1.34-9.67)^{\text {b }}$ |
|  | $n$ | 2,086 | 1,911 | 225 |
| Women | Age 39-44 years | 1.0 | 1.0 | 1.0 |
|  | 45-49 | 0.73 (0.40-1.33) | 0.80 (0.53-1.19) | 0.63 (0.35-1.14) |
|  | 50-54 | 0.51 (0.24-1.08) | 0.51 (0.32-0.82) ${ }^{\text {b }}$ | 0.63 (0.35-1.13) |
|  | 55-64 | 0.33 (0.12-0.90) ${ }^{\text {c }}$ | 0.41 (0.25-0.68) ${ }^{\text {b }}$ | 0.39 (0.22-0.68) ${ }^{\text {b }}$ |
|  | Decision latitude ${ }^{\text {d }}$ | 1.21 (0.49-2.99) | $1.54(1.11-2.13)^{b}$ | 0.91 (0.59-1.40) |
|  | Home control ${ }^{d}$ | 0.93 (0.37-2.36) | 1.50 (0.86-2.60) | 2.55 (1.42-4.59) ${ }^{\text {b }}$ |
|  | Marital status ${ }^{\text {d }}$ | 1.01 (0.56-1.81) | 0.96 (0.68-1.37) | 0.88 (0.58-1.35) |
|  | Number of children ${ }^{d}$ | 1.03 (0.78-1.36) | 0.95 (0.80-1.12) | 1.14 (0.95-1.36) |
|  | Caregiving status ${ }^{\text {d }}$ | 2.13 (1.07-4.26) ${ }^{\text {c }}$ | 1.20 (0.75-1.91) | 1.04 (0.59-1.86) |
|  | $n$ | 319 | 797 | 588 |

a. $\mathrm{OR}=$ Odds ratio estimated by logistic regression. $\quad$ b. $p$-value $\leq 0.01 . \quad$ c. $p$-value $\leq 0.05$.
d. marital status $(0=$ married, $1=$ unmarried $)$, number of children $(0=$ none $)$, caregiving status $(0=$ not a caregiver $)$, decision latitude ( $0=$ high control), home control ( $0=$ high control).

As we noted previously, the lack of statistical significance may be a function of the relatively smaller sample size for men in the lowest grade. We did not find a clear gradient for women with low decision latitude across employment grades. Instead, we found that women in the middle grade had a significant risk for anxiety disorders $(\mathrm{OR}=1.54, \mathrm{CI}=1.11-2.13)$ and a greater risk than women in the other grades.

After controlling for age and decision latitude, we also found a gradient for control at home on anxiety. We found women in the lowest grade and men in the middle and highest grades to have the highest odds for anxiety disorders if they reported low control at home (for women, $\quad \mathrm{OR}=2.55, \quad \mathrm{CI}=1.42-4.59 ;$ for men, middle grade, $\mathrm{OR}=1.86, \mathrm{CI}=1.33-2.58$; and, highest grade, $\mathrm{OR}=2.17, \mathrm{CI}=1.60-$ 2.94). In addition to low control at home, we found that for men in the middle and low grades and women in the high grade, the greatest risk factor for anxiety disorders was if they also provided care to disabled or ageing relatives.

## 6. Discussion

In this study we investigated the relationships among gender, decision latitude, home control and the risk for depression and anxiety across three employment grades. We hypothesised that low job and home control would increase the risk for depression and anxiety. We expected home control to contribute more to the risk for women's psychological ill health and decision latitude for men's. We also believed that across employment grades we would find a gradient in risk for each outcome and that low levels of job and home control would explain part of the gradient.

As expected, a greater proportion of women than men were classified as depression and anxiety cases and this was true across nearly all employment grades. Both younger women and men were more likely to be depressed than those who were older, but unlike previous studies, number of children was not a significant predictor for depression or anxiety. This, in part, may be due to the fact that a large proportion of women in the middle and high employment grades and men in the lowest grade were childless (as shown in Table 1). It may also be, that given the age of the participants (from 39 to 64), few had young chil-
dren or children living at home. In fact, for this age group, the additional strain from family or social obligations may lie more with providing care to elderly or ageing spouses and parents than with raising children. We found this to be particularly true for men. Men who were caregivers consistently had a significantly higher risk for depression and anxiety.

We found that low decision latitude at Phase 3 predicted a risk for depression at Phase 5 among women and men and this risk did not diminish after controlling for home control, marital status, number of children, and caregiving status. Although the effect of low decision latitude on depression and anxiety was stronger for men than women, as we expected, the effect for women, particularly for depression, was remarkable. Women with low decision latitude had more than a $40 \%$ greater risk for depression than women with high control, while men's odds were $50 \%$ greater if they reported low decision latitude. When we stratified by gender and social position as shown in Tables 5 and 6, we found that the risk was not evenly distributed across social position for women or men. Both women and men in the middle employment grade with low decision latitude were at significantly greater risk for depression than those in the lowest and highest grades. The same pattern existed for anxiety, except that men in the low grade also had an elevated risk that was not statistically significant.

Both women and men with low control at home were at significantly greater risk for depression and anxiety. One striking finding was that women with low control at home had over twice the risk for depression than women with high control even after controlling for marital status, number of children, and caregiving status. Also impressive was the substantial effect low home control had on men's risk for depression.

In our confirmation analyses, where we examined only those who were not cases at Phase 3, the effect of decision latitude and control at home on depression and anxiety either decreased or was virtually unchanged for women and men. The largest decrease in odds was when we examined the effect of decision latitude on depression. These changes may have been due to the fact that the relationship between depression caseness at Phase 3 and Phase 5 was so great and not independent of decision latitude that the group that remained after cases were excluded had an unusual distribution of decision latitude. The relatively even percentage of change in odds ratios (decreasing 18-26\%)
suggests that this is not the case for the relationship among control at home and depression and anxiety, nor is it situation between decision latitude and anxiety, where the odds ratios increased for men ( $2 \%$ ) and decreased for women ( $22 \%$ ).

We had hypothesised that low decision latitude and low control at home would be a psychologically harmful combination, but did not find any evidence for this. Instead we found that exposures to low control in both the home and work environment were unique to each environment, each with a main effect that increased the risk for depression, and for men increased the risk for anxiety. In subsequent analyses we also tested for interactions between decision latitude and all of the social roles we studied (marital status, number of children, and caregiving status), and again, did not find any evidence of an additional risk for depression or anxiety in women or men. What we did not test here, however, were the specific effects of spillover or workfamily conflict. An investigation examining more precise questions on balancing the demands and responsibilities of work and family and the effect of this on psychological and physical health is currently underway. Similarly, it is beyond the scope of this paper to test for any beneficial or buffering effects from social support or rewards from work and home that may explain the lack of an interaction between home and work.

For this investigation we were also interested in whether a social class gradient existed for women and men with depression and anxiety. When we compared the low and middle grades to the highest in Tables 3 and 4, we did find a linear pattern: women and men in the lowest grades had the highest risk for depression and anxiety. That this gradient is reduced (and at times is no longer statistically significant) but still persists after controlling for decision latitude, home control, number of children, and marital and caregiver status, suggests that other factors are also at play. Previous analyses in this cohort suggest that social support, life events, and material problems are also important in explaining the gradient (Stansfeld et al., 1998).

One underlying assumption in the job stress and gender frameworks, or perhaps in researchers' use of them, is that, with little regard for social position, men's identity is tied more to their role at work and women's to their roles at home. This assumption leads to the common approach of narrowly looking only at the effect of stressful job characteristics for men and the characteristics of home or social roles for
women. Our findings show, however, that low control at home, just like low control on the job, affect the psychological morbidity of both women and men differently, and this is, in part, because of their social position. As shown in Tables 5 and 6, women in the lowest employment grade with low control at home had a significantly higher risk for depression than men across all grades and women in higher grades. Women and men in the middle and highest grade had somewhat comparable risks. The findings for anxiety are quite different, for they show an inverse gradient in risk for women and men. Men in the highest grade with low control at home were at higher risk for anxiety than men in lower grades while women in the lowest grade had a higher risk than women in higher grades. We conclude, as others have done before us (Arber, 1991; Hall, 1989), the identification to or measurement of only one role is too simplistic and does not take into account the different experiences women and men face at work and in the home. In the future, models need to be modified to incorporate work, home, and social position variables for men and women.

The importance of low home control as a risk factor for depression and anxiety brings into question the meaning of the construct. In the sociology of work and family, the construct has been described and interpreted in two different ways. The first is that control at home is the ability to maintain family and home obligations and cope with day-to-day stressors. In this sense, the link between low control at home and psychological distress may indicate a lack of resources for coping with excessive demands from housework and family responsibilities (Lennon and Rosenfield, 1992; Pearlin and Schooler, 1978; Pearlin, 1989) or material resources (Walters et al., 1996) that make services and support more easily accessible. This interpretation leaves some confusion about whether the construct is a description of control, demands, or something more latent that includes both demands and control.

The second common interpretation relates to inequities in the division of labour at home and the roots of the inequities (Bird, 1999). In other words, control at home is based on power and power within relationships. High control at home, for example, may be having the power to assign household tasks to family members and assure they are done in an appropriate way, or, perhaps, control over the household income to be used at one's discretion. Rosenfield (1989) found that low power (operationalised as the proportion of personal income to total household income) accounted for gender differences in psycho-
logical distress, but that the relationship was mediated by one's level of personal control. Using this perspective, men and women may interpret the construct differently based on their relationships with family members or their adherence to traditional gender roles. Those who share household and familial responsibilities may value the work differently than those who perform more conventional roles. The relationship between power and control emphasizes the importance of gender relations and reinforces the need to include additional, more precise questions regarding the division of labour and inequities at home. Moreover, for future studies there is a need to decipher how power and control are interpreted differently among men, women, and people from different social positions.

In sum, we found support for an integrated model to examine factors associated with depression and anxiety in women and men. For women we found that a lack of control at home and work predicted later development of depression, and for men, low control at home and work increased odds of depression and anxiety. We discovered that, in addition to age and gender, risk factors for depression and anxiety included the level of control participants reported at home and work and where in social hierarchy women and men sit. In other words, risks for depression and anxiety, such as low control at home and work, are not evenly distributed across different social positions, although the patterns are much more consistent for women. Women in the lowest or middle employment grades who reported low decision latitude or low control at home were at most risk for depression and anxiety. Men in the middle grade with low decision latitude were at risk for depression, but those in the lowest grade were at risk for anxiety. Men in the middle and highest grades, however, were at greatest risk for both outcomes if they reported low control at home. While we suggest that control at home and at work are included in models examining health inequalities, we also emphasise the need for more theoretical work on the meaning of the construct of control at home and how it varies by gender and social position.

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# SOCIOECONOMIC GRADIENTS IN PSYCHOLOGICAL DISTRESS: A FOCUS ON WOMEN, SOCIAL ROLES AND WORK-HOME CHARACTERISTICS* 

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#### Abstract

A focus in the literature on determinants of women's health is the cost and benefit of occupying multiple roles as employee, spouse, and mother, yet little attention has been given to the work, and home characteristics of different roles for women in paid and unpaid work. The impact of work-bome factors on socioeconomic gradients in bealth has also tended to be overlooked. This paper assesses the contribution of work-home factors on socio-economic differences in psychological distress among women, using data from the 1958 British birth cohort. Outcome measures include psychological distress and social class at age 33. Work-home measures include: (1) roles: employment, marital status, domestic responsibility and parental status; (2) work characteristics: psychosocial job strain, insecurity, unsocial working hours; and (3) bome characteristics: youngest child's age, total number of cbildren, childcare responsibilities and having an older adult in the bousehold (over 70). A social gradient in psychological distress exists: the odds ratio (OR) for classes IV and V vs. I and II was 3.02, adjusting for prior psychological distress reduces this to 2.36.


[^29]Whilst, work and home factors were associated separately with distress and social class, the combined effect of work and home factors did not account for the class gradient in distress. This surprising result therefore implicates factors beyond adult social roles examined here in the development of socio-conomic gradients.

Keywords: Job-strain, Domestic responsibility, Women, Socioeconomic position, Psychological distress, British birth cohort.


#### Abstract

Résumé La littérature sur les déterminants de la santé féminine met l'accent sur les coûts et bénéfices de l'exercice de rôles multiples - employée, épouse et mère -, mais elle fait peu de place aux caractéristiques professionnelles et domestiques des divers rôles des femmes dans leurs activités rémunérées et non rémunérées. L'impact de ces facteurs sur les gradients socioéconomiques de la santé a aussi été laryement ignoré. En exploitant des données relatives à la génération britannique 1958, cette communication évalue la contribution des caractéristiques domestiques et professionnelles aux différences socioéconomiques de morbidité psychologique chez les femmes. Les paramètres du phénomène dépendant sont les troubles psychologiques et la classe sociale à l'âge de 33 ans. Les caractéristiques professionnelles et domestiques sont: (1) les rôles: emploi, situation matrimoniale, responsabilités domestiques et situation parentale ; (2) les caractéristiques de l'emploi : pression psychologique au travail, insécurité, horaires de travail anormaux ; et (3) les caractéristiques du foyer: nombre d'enfants, âge du plus jeune, responsabilités maternelles, présence d'un adulte âgé de plus de 70 ans. Ily a bien un gradient social de morbidité psychologique : le rapport des risques des classes IV et V à ceux des classes I et II vaut 3,02 (odds ratio) ; il est ramené à 2,36 quand on contrôle les troubles psychologiques antérieurs. Alors que les facteurs domestiques et professionnels sont séparément associés à la morbidité psychologique et à la classe sociale, leur effet combiné n'explique pas le gradient social de la morbidité psychologique Ce résultat surprenant montre donc que des facteurs autres que les rôles sociaux des adultes examinés ici sont impliqués dans le développement des gradients socioéconomiques.


Mots-clés : Pression psychologique au travail, Femmes, Responsabilités domestiques, Situation socioéconomique, Troubles psychologiques, Génération britannique.

## 1. Introduction

The existence of socioeconomic inequalities in health has long been established (Fox, 1989; Townsend and Davidson, 1992). Generally, health improves with each increment in the social hierarchy, and this pattern holds for most causes of morbidity and mortality, although for women the trend is less consistent (Macintyre, 1998). An extensive literature exists on the impact of work and home factors for adult health. Differences in these factors may contribute to the development of socio-economic health gradients. Some studies have examined the influence of work and home factors on health (Hibbard and Pope, 1987; Hall, 1992; Hunt and Annandale, 1993). However in the main, there appears to be a gender divide, such that work factors are considered for men and home factors for women; alternatively, the focus is on gender differences rather than on social differences in health. Here, we consider the joint effect of work-home factors in the development of socio-economic health inequalities among women, focusing on psychological health.

Psychosocial work characteristics as a determinant of socioeconomic gradients has been mostly neglected in studies on women, though there are exceptions (Marmot et al., 1998; Martikainen et al., 1999). The original 'job strain' model, as outlined by Karasek (1979) postulated that job strain resulted from an interaction between demand and control at the task level. A job with high demands and low control was regarded as producing high strain, whilst a job with high control and low demand was considered to be low strain. The inclusion of women into investigations on psychosocial work characteristics has tended to be restricted to those in paid employment. Indeed Karasek and Theorell (1990) found that women in the paid work force had lower levels of decision latitude or control than men, whilst the psychological demands in the work place did not differ by gender. Determining the role of 'work' demands on women is complex largely due to their varied work patterns. Rosenfield (1989) has shown that home work, associated with the 'housewife' role, tended to be more routine and demanding than for women in paid work, but control at the task level was greater in home work. In the US, Lennon (1994) compared employed women and home workers, and found that home work was more autonomous, prone to interruptions, physically demanding and routine than paid work.

Within women's health research a key focus has been on the positive or negative effects of multiple role occupancy, including the roles of mother, spouse and employee. Two strands predominate - role accumulation or the enbancement hypothesis (Sieber, 1974), which focuses on the beneficial effects on health of occupying multiple roles (Nathanson, 1980; Aneshensel et al., 1981; Gore and Mangione, 1983; Verbrugge, 1983; Sorensen and Verbrugge, 1987; Hibbard and Pope, 1991; Sogaard et al., 1994). For instance, Thoits (1983) has argued that role identities are important sources of psychological well being as the role requirements attached to each role give purpose, meaning and direction to one's life. By contrast the role strain or overload hypothesis views multiple roles as a source of strain with detrimental health effects. For instance, women with heavy responsibilities for household tasks and childcare combined with employment demands are subject to stress, therefore any positive effect derived from paid employment for working mothers may be mitigated by role overload (Williams et al., 1991; Ross and Mirowsky, 1992). Several studies have also found an increased risk of developing psychological disorder among women who are married, of low socio-economic position, without paid employment outside the home, and who care for small children (Brown and Harris, 1978; Surtees et al., 1983).

A number of studies have integrated work and home characteristics when examining determinants of women's health (Haynes and Feinleib, 1980; Barnett et al., 1991; Lennon and Rosenfield, 1992; Roxburgh, 1997; Barnett, 1997). Waldron (1980) concluded that the effects of employment on women's health depend on the type of job and family situation of the women. Adverse effects of paid employment appear to be most likely for women in time pressured repetitive jobs, involving exposure to occupational hazards. Additionally, Hibbard and Pope (1987) suggested an interactive effect of home and work characteristics among women, with single mothers and those holding jobs with low quality intrinsic work characteristics having poor mental health. Hall (1992) showed that as well as psychosocial job demands, social support and job hazards, having older and younger children combined with home duties were related to psychosomatic strain. Whereas, Hunt and Annandale (1993) found domestic work alone had some effect on women's psychological health, although this effect was less than that for paid work alone.

The literature on multiple roles has sought to explain the higher incidence of morbidity, especially anxiety and depression among
women. With few exceptions (Nathanson, 1980; Arber, 1991) these studies have failed to assess the impact of multiple roles and circumstances on the socio-economic gradient in health, rather, socioeconomic position has been treated as a control variable (Surtees et al., 1983; Jenkins, 1985; Romans-Clarkson et al., 1988; Bird and Fremont, 1991; Martikainen, 1995; Weich et al., 1998). Where socio-economic position has been examined directly, findings have been inconsistent. It has been argued that employment is more beneficial to middle class than working class women, because with better education and higher aspirations, the former experience more loss of status as full-time housewives (Howe, 1973). In contrast, Waldron and Jacobs (1988) found that labour force participation had beneficial effects on health (physical and psychosomatic conditions) for manual class married women, but harmful effects for white collar married women. Warr and Parry (1982) argue that a job is more psychologically beneficial for women whose home environment is adverse, where housing conditions are poor, where there is domestic stress or where financial resources are extremely scarce. Such differential associations may play a part in the development of health inequalities.

Examining the combined contribution of multiple roles and home and work characteristics on the socio-economic gradient in health is an under-researched area. In previous studies we have shown several work and home factors having an impact on the socio-economic gradient in self-rated health (Power et al., 1998), and socio-economic trends in psychosocial strain for employed women, but not among women who primarily looked after the home (Matthews et al., 1998). We also found socio-economic gradients in levels of social support, although these trends were weak (Matthews et al., 1999). Our aim here is to extend these analyses, by assessing whether social inequalities in psychological distress can be explained by work and home characteristics and the multiple roles occupied by women. To achieve this we examine two related questions: (1) are work and home factors associated with psychological distress? and (2) are work and home factors associated with socio-economic position?

## 2. Methods

### 2.1. Sample

The 1958 National Child Development Study (NCDS) is a birth cohort study which includes all children born in one week in March in 1958 in England, Wales and Scotland. Information was collected on 98 percent of births totaling 17,414 . Follow-up of survivors was undertaken at ages $7,11,16,23$ and most recently in 1991 at 33 years, when 11,405 subjects ( 69 percent of the target) were re-interviewed (Ferri, 1993), approximately half were women (5799). Those remaining in the study were generally representative of the original sample (Ferri, 1993). However, sample attrition has resulted in a slight under representation of those in the more disadvantaged social groups. For instance $19.1 \%$ of women in our multivariate analysis (which includes all work and home factors) had been born into social classes IV and V in 1958, compared with $21.4 \%$ in the original sample. Small biases are also evident for those who were born into a household with no male head, $3.3 \%$ in the original 1958 sample compared to $2.1 \%$ in our multivariate sample. All information used in the present paper was collected at age 33, except psychological distress for which we used data for both ages 23 and 33.

### 2.2. Measures

Social class was based on the 1990 British Registrar General's classification of occupations: $72 \%$ of women were classified according to their current job, the remainder by their most recent job. Women were classified according to their own occupation. Four categories are used: classes I and II (professional and managerial), IIInm (other skilled nonmanual), IIIm (skilled manual), and IV and V (semi and unskilled manual).

Psychological distress at ages 23 and 33 was indicated by a score of 7 or more on the Malaise Inventory (Power and Hertzman, 1997; Hope et al., 1999). The Inventory comprises a self-completion 24 item checklist of symptoms, including mostly emotional symptoms (depression, anxiety, irritability and fearfulness) and also psychosomatic illness (eg headache, indigestion and back-ache). Although no specific time frame is used, the focus is on recent state. The Inventory has acceptable internal
consistency (Cronbach's alpha $=0.77$ at age 23 and 0.80 at age 33) (Rodgers et al., 1999).

### 2.2.1. Work role

Employment status was based on respondent's reports of their current main economic activity: full-time ( 30 hours or more per week $37 \%$ ) or part time employed (less than 30 hours - $32 \%$ ), home-workers (those who care for the family or home, that is the traditional housewife role - $27 \%$ ), and others ( $2 \%$ unemployed, $<1 \%$ full-time education, and $1 \%$ temporarily or permanently sick). Figure 1 shows social class gradients in psychological distress for these four employment groups. Gradients are very similar for those in employment, irrespective of hours worked. Hereafter, the groups were therefore collapsed into currently employed and not employed.

Figure 1
Psychological distress (\%) of women by employment status and social class


### 2.2.2. Work characteristics

Psychosocial work characteristics: respondents (in and out of the paid labour force) were presented with four statements about work characteristics. (1) 'my work requires me to keep learning new things' (learning); (2) 'my work is monotonous because I always do the same things' (monotony); (3) 'I can only take breaks at certain times' (breaks); and (4) 'I am able to vary the pace at which I work' (pace). Response categories ranged from 'very true' to 'not at all true'. These were dichotomised to reflect negative work characteristics. A sum of these negative work characteristics was calculated across the four variables (psychosocial strain), ranging from $0-4$; two or more defined a high level of negative work characteristics (Matthews et al., 1998).

Job insecurity: respondents were presented with the statement 'my present work skills will be useful or valuable in five years time'. Response categories ranged from 'very true' to 'not at all true', these were dichotomised, with 'very true' and 'true' combining to form 'security' and the remaining three groups combining to represent insecurity. Women reported information irrespective of whether they were in paid or unpaid work.

Redundancies: whether the respondent had been made redundant between ages 23 and 33 or not.

Unsocial working hours: of the current or most recent job, involved working nights (between 10 pm and 7 am ) and weekends.

### 2.2.3. Home roles

Marital status: currently married or cohabiting. Single, divorced, widowed and separated formed a second category.

Domestic responsibilities: 6 questions were asked of those with a partner. In your family, who does each of these things most of the time? (a) Preparing and cooking the main meal; (b) Shopping; (c) Cleaning the home; (d) Laundry and ironing; (e) Household repairs, DIY, decorating; (f) Looking after household money and paying bills. Response categories were: 'I do most', 'my partner does most of it', 'we share more or less equally', 'someone else does it', 'does not apply'. The first category ('I do most') (allocated a score of 1) was retained but other categories were combined (allocated a score of 0). (Those without a partner were categorized as 'I do most'.) Domestic responsibilities were summed across the 6 questions to form a scale, ranging from $0-6$ and
dichotomized with two as the cut off. Those scoring three or more were defined as having high domestic responsibility.

Parental status: the presence of any children (natural, adopted, step or foster) living in the household versus none.

### 2.2.4. Home characteristics

Older person in the household: the presence of an older person (over age 70) living in the household or not.

Age of the youngest child in the household was categorized as 0-6 years, above 6 years and 'no children'.

Total number of children: categorized as 0-2 and 3 or more children.
Cbild care: respondents were asked who was 'generally with and looking after the children'? Response categories were: 'I do most', 'my partner does most', 'we share more or less equally', 'someone else does it', 'does not apply'. The response 'I do most' was retained (coded 1) whilst the other categories were combined (coded 0). Single parents were categorized as 'I do most'.

### 2.2.5. Miscellaneous

Partner's employment status: categorized as: 'no partner, 'employed' and 'not working'.

Social support: Respondents nominated up to four sources of emotional and practical support (e.g. spouse/partner, parent/in law; other relative, friend or neighbour, and someone you work with). They identified these sources of support for three components of emotional support (personal advice, confiding and distress support) and three components of practical support (domestic help, financial, and household DIY). The number of support sources was summed for each component and summed within the practical and emotional dimensions. A score of 3 or less on either emotional or practical support was defined as low support (Matthews et al., 1999).

### 2.3. Data analysis

In order for work-home roles and characteristics to contribute to social class differences in women's psychological distress, they must simultaneously be associated with psychological distress and social class. We therefore used logistic regression to estimate odds ratios
(OR) and $95 \%$ confidence intervals (CI) for the associations between (i) psychological distress and each work and home role or characteristic separately, and (ii) social class and each role or characteristic. These analyses were conducted with and without adjustment for prior psychological distress (at age 23), which was used as a proxy for the cumulative effects of earlier life experience. To address the final aim, we performed a series of logistic regression analyses to determine the impact of work-home factors on class differences in psychological distress at age 33, adjusting for prior psychological distress (at age 23). Roles were included in the model first, followed by characteristics. As a summary measure we report results for social classes IV and V relative to classes I and II (Manor et al., 1997). The final stage of analysis had been conducted on a reduced sample (i.e. all with relevant data). We therefore repeated analyses for (i) and (ii) above, to check whether the associations were affected by sample attrition. Similar results were obtained for the different samples and so we present associations for all women with relevant data (Tables 1 and 2).

## 3. Results

By age 23, a significant social class gradient in psychological distress is evident for women, this gradient persists to age 33 (Figure 2). This is the gradient we are seeking to explain.

### 3.1. Psychological distress and work-home roles and characteristics

Table 1 shows the associations between work-home roles and characteristics and psychological distress presented as odds ratios (OR), that is the odds of distress in one subgroup (for example, being employed) relative to the other subgroup (the non-employed). With regard to work roles, employed women had a reduced risk (unadjusted $\mathrm{OR}=0.62$ ) of psychological distress relative to the non-employed at age 33. For home roles, a lower risk of psychological distress was also associated with marriage ( $\mathrm{OR}=0.57$ ), whilst mothers were more likely to report psychological distress ( $\mathrm{OR}=1.47$ ). No significant association was evident for sole responsibility for domestic chores.

Figure 2
Psychological distress among women by social class at ages 23 and 33


With regard to work characteristics, only two of the four psychosocial strain characteristics (learning and monotony) and the summary measure of psychosocial strain were associated with elevated distress, with monotony showing the strongest association (Table 1). Job insecurity was significantly associated with psychological distress ( $\mathrm{OR}=1.91$ ), yet job redundancy, another dimension of insecurity, showed no significant association, nor did working unsocial hours. In contrast, most home characteristics were associated with psychological distress, i.e. having a youngest child over six years of age ( $\mathrm{OR}=2.26$ ), having three or more children ( $\mathrm{OR}=1.92$ ) and doing most of the childcare ( $\mathrm{OR}=1.48$ ) were associated with elevated distress. Having an older adult in the household was not associated with elevated distress in women. In addition to the work and home characteristics, we also examined partner's employment status and social support. There was a significantly increased risk of psychological distress for those whose partners were not employed. Those with low support were more likely to report psychological distress.

Table 1
Associations (odds ratios) for women between psychological distress at age 33 and the work and home environment ${ }^{a}$

|  | $N$ | Unadjusted OR | 95\% CI | Adjusted OR ${ }^{b}$ | 95\% CI |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Work role |  |  |  |  |  |
| Being in paid employment | $(4,985)$ | $0.62^{* * *}$ | (0.52, 0.74) | $0.69^{* * *}$ | (0.57, 0.83) |
| Work characteristics |  |  |  |  |  |
| Psycho-social strain | $(4,735)$ | $1.78{ }^{* * *}$ | (1.49, 2.14) | $1.53^{* * *}$ | (1.25, 1.86) |
| Lacks learning opportunities | $(4,670)$ | $1.43{ }^{* * *}$ | (1.18, 1.74) | 1.21 | (0.98, 1.50) |
| Monotonous work | $(4,766)$ | $2.59^{* * *}$ | (2.16, 3.11) | $2.00^{* * *}$ | (1.71, 2.55) |
| Regulated work pace | $(4,756)$ | 1.13 | (0.91, 1.41) | 1.17 | (0.93, 1.49) |
| Set break times | $(4,751)$ | 1.04 | (0.86, 1.25) | 1.04 | (0.85, 1.27) |
| Job insecurity | $(4,751)$ | 1.91 *** | (1.54, 2.36) | $1.91{ }^{* * *}$ | (1.25, 2.00) |
| Ever been made redundant | $(4,719)$ | 1.07 | (0.80, 1.45) | 0.98 | (0.71, 1.34) |
| Unsocial working hours | $(4,960)$ | 1.16 | (0.87, 1.54) | 1.20 | (0.88, 1.63) |
| Home roles |  |  |  |  |  |
| Married or cohabiting | $(4,870)$ | $0.57^{* * *}$ | (0.47, 0.68) | $0.63{ }^{* * *}$ | (0.51, 0.77) |
| Sole responsibility for 3 or more domestic tasks | $(3,982)$ | 0.94 | (0.73, 1.19) | 0.91 | (0.71, 1.19) |
| Children in household | $(4,916)$ | $1.47^{* * *}$ | (1.17, 1.85) | $1.39{ }^{*}$ | (1.09, 1.76) |
| Home characteristics |  |  |  |  |  |
| Person over age 70 in the household | $(4,951)$ | 1.32 | (0.71, 2.45) | 1.16 | (0.59, 2.28) |
| Youngest child in household |  |  |  |  |  |
| 0-6 years of age | $(4,916)$ | 1.18 | (0.93, 1.50) | 1.13 | (0.88, 1.46) |
| age $6+$ years |  | $2.26{ }^{* * *}$ | (1.75, 2.91) | $2.04{ }^{* * *}$ | (1.55, 2.69) |


| Number of children |  |  |  |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- |
| $1-2$ | $(4,686)$ | 1.29 | $(1.00,1.67)$ | 1.24 | $(0.94,1.63)$ |
| $3+$ |  | $1.92^{* * *}$ | $(1.44,2.56)$ | $1.55^{* *}$ | $(1.14,2.12)$ |
| Sole child care responsibility |  | $1.831)$ | $1.48^{* * *}$ | $(1.24,1.77)$ | $1.38^{* *}$ |
| Miscellaneous |  |  |  | $(1.14,1.67)$ |  |
| Partner not employed | $(4,937)$ | $2.01^{* * *}$ | $(1.44,2.81)$ | $1.85^{* * *}$ | $(1.28,2.67)$ |
| Low emotional and practical social support | $(4,680)$ | $1.57^{* * *}$ | $(1.22,2.01)$ | $1.36^{*}$ | $(1.04,1.80)$ |

a. Reference categories for work-home roles and characteristics: being employed versus not in employment; high psychosocial strain versus low strain; no learning opportunity versus any learning opportunity; monotony versus none; regulated work pace versus flexible work pace; set break times versus varied; job insecurity versus job security; ever redundant versus never; unsocial working hours (weekends and nights) versus not; married/ cobabiting versus not married (all others); sole responsibility for 3 or more domestic tasks versus sole responsibility for 0-2 tasks; cbildren in the household versus none; person over age 70 in the household versus none; youngest child in the household $0-6$ years versus no child; over age 6 versus no child; 3 or more children in the bousehold versus $0-2$ children in the household; sole child care responsibility versus shared or no responsibility; partner not employed versus employed partner; low emotional and practical social support versus all others.
b. Adjusted for psychological distress at age 23.
${ }_{* * *} p<0.0005,{ }^{* *} p<0.005,{ }^{*} p<0.05$.

Table 2
Association (odds ratio) between social class at age 33 and work-home characteristics ${ }^{a}$ (women in classes IV and V versus I and II)

|  | $N^{b}$ | Unadjusted OR | $95 \%$ CI | Adjusted OR ${ }^{\circ}$ | $95 \%$ CI |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Work role |  |  |  |  |  |
| Being in paid employement | $(4,970)$ | $0.40^{* * *}$ | $(0.33,0.47)$ | $0.41^{* * *}$ | $(0.34,0.49)$ |
| Work characteristics |  |  |  |  |  |
| Psycho-social Strain | $(4,725)$ | $2.66^{* * *}$ | $(2.25,3.15)$ | $2.54^{* * *}$ | $(2.15,3.01)$ |
| Lacks learning opportunities | $(4,740)$ | $6.52^{* * *}$ | $(5.31,8.00)$ | $6.33^{* * *}$ | $(5.14,7.78)$ |
| Monotonous work | $(4,756)$ | $4.60^{* * *}$ | $(3.82,5.55)$ | $4.30^{* * *}$ | $(3.56,5.19)$ |
| Regulated work pace | $(4,746)$ | 0.93 | $(0.77,1.13)$ | 0.94 | $(0.77,1.14)$ |
| $\quad$ Set break times | $(4,741)$ | 0.89 | $(0.76,1.04$ | 0.88 | $(0.75,1.04)$ |
| Job insecurity | $(4,741)$ | $6.97^{* * *}$ | $(5.40,9.00)$ | $6.66^{* * *}$ | $(5.15,8.60)$ |
| Ever been made redundant | $(4,721)$ | $1.52^{* *}$ | $(1.17,1.98)$ | $1.50^{* *}$ | $(1.15,1.95)$ |
| Unsocial working hours | $(4,945)$ | $0.74^{*}$ | $(0.59,0.94)$ | $0.74^{*}$ | $(0.59,0.94)$ |
| Home roles |  |  |  |  |  |
| Married or cohabiting | $(4,855)$ | $1.20^{*}$ | $(1.02,1.43)$ | $1.28^{* *}$ | $(1.08,1.52)$ |
| Sole responsibility for 3 or more domestic tasks | $(3,971)$ | $1.62^{* * *}$ | $(1.35,1.94)$ | $1.63^{* * *}$ | $(1.33,2.00)$ |
| Children in the household | $(4,901)$ | $5.47^{* * *}$ | $(4.41,6.80)$ | $5.47^{* * *}$ | $(4.39,6.80)$ |
| Home characteristics |  |  |  |  |  |
| Person over age 70 in the household | $(4,937)$ | $0.50^{* *}$ | $(0.25,0.97)$ | $0.46^{*}$ | $(0.24,0.91)$ |
| Youngest child in the household over age 6 | $(4,901)$ | $4.09^{* * *}$ | $(3.35,5.00)$ | $3.98^{* * *}$ | $(3.25,4.86)$ |
| 3 or more children | $(4,670)$ | $3.31^{* * *}$ | $(2.71,4.06)$ | $3.16^{* * *}$ | $(2.57,3.88)$ |
| Sole child care responsibility | $(4,817)$ | $2.14^{* * *}$ | $(1.83,2.51)$ | $2.09^{* * *}$ | $(1.79,2.45)$ |


| Miscellaneous |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Partner not employed | $(4,922)$ | $3.14^{* * *}$ | $(2.16,4.57)$ | $3.03^{* * *}$ | $(2.07,4.42)$ |
| Low emotional and practical social support | $(4,670)$ | $2.08^{* * *}$ | $(1.66,2.67)$ | $1.99^{* * *}$ | $(1.55,2.56)$ |

a. Reference categories for work home roles and characteristics the same as for Table 1, except for youngest child in the household over age 6 versus all others (those with a child aged $<6$ years have a similar risk of distress to those with no children and hence these two categories have been combined).
b. Of this sample $31 \%$ were in classes I and II, $38 \%$ in IIInm, $7 \%$ in IIIm, and $24 \%$ in IV and V.
c. Adjusted for psychological distress at age 23.
${ }^{* * *} p<0.0005,{ }^{* *} p<0.005,{ }^{*} p<0.05$.

Adjustment for psychological distress at age 23 slightly weakened the associations observed for several factors in Table 1.

These bivariate relationships do not support a simple role strain hypothesis because some roles were associated with decreased risk of psychological distress (employment and being married) yet others appear to increase the risk (being a parent). Furthermore, domestic responsibility showed no association. Summing these 4 roles shows declining psychological distress with increasing number of roles. The trend across the number of roles is significant $(\mathrm{OR}=0.81,95 \%$ CI $=0.75-0.87$ ). Notwithstanding the magnitude of associations, the impact of work-home roles and characteristics on the socio-economic gradient in psychological distress also depends on the extent to which these factors are socially patterned.

### 3.2. Social patterning of work-home roles and characteristics

Next we examine whether work and home roles and characteristics differ according to social class at age 33 (Table 2). Results are expressed as odds ratios, summarized by the odds of each role or characteristic in classes IV and V relative to I and II. For example, the odds of women in classes IV and V being employed at age 33 are estimated relative to women in classes I and II (unadjusted OR $=0.40$ ). For the work role it is evident that having paid employment is strongly associated with social class at age 33: women in lower social classes are $60 \%$ less likely to be employed relative to those in classes I and II. For home roles, women in classes IV and V were more likely to be married $(\mathrm{OR}=1.20)$, to be mothers $(\mathrm{OR}=5.47)$, and do most domestic tasks unassisted $(\mathrm{OR}=1.62)$ than those in classes I and II. In contrast, those in classes IV and V were $50 \%$ less likely to have an older person in the household.

For work characteristics, we see that among psychosocial work characteristics, lack of learning opportunity ( $\mathrm{OR}=6.52$ ), monotony $(\mathrm{OR}=4.60)$ and the summary index of psychosocial strain $(\mathrm{OR}=2.66)$ were strongly associated with low social class at age 33. Job insecurity also demonstrated a strong association with social class, with an odds ratio just under seven. Women in classes IV and V had a higher risk of redundancy $(\mathrm{OR}=1.52)$, but a lower risk of working unsocial hours $(\mathrm{OR}=0.74)$, than those in classes I and II.

Significant associations were evident between social class and all home characteristics. Particularly strong associations were evident between social class and age of the youngest child in the household and total number of children: women in classes IV and V were more likely to have a youngest child aged 6 or more $(\mathrm{OR}=4.09)$, and to have three or more children ( $\mathrm{OR}=3.31$ ). Social class was also associated with social support: lower class women have less support than those in classes I and II $(\mathrm{OR}=2.14)$. There was also an association between class and partner's employment status: classes IV and V were over three times $(\mathrm{OR}=3.14)$ as likely to have a non-employed partner relative to women in classes I and II. In general, adjustment for psychological distress at age 23 slightly weakened the associations between social class and work-home factors (Table 2).

To summarize the associations with social class, psychosocial work characteristics and job insecurity showed the strongest relationships among work factors, whilst for the home environment, factors relating to children showed the strongest associations. Coupled with the other results, these findings suggest a greater importance of work-home characteristics rather than work-home roles in the development of the socio-economic gradient in psychological distress. By summing the four work-home roles we found that women in classes IV and V were more likely to perform a higher number of roles (i.e. 3 or 4) relative to those in classes I and II ( $\mathrm{OR}=1.43,95 \% \mathrm{CI}=1.23-1.66$ ).

### 3.3. Social inequalities in psychological distress and work-home roles and characteristics

Table 3 integrates both work and home factors in a final model to explain the social gradient in psychological distress at age 33. Because class differences in distress are not merely a function of current circumstances but are influenced by earlier life factors, we adjust for prior psychological state at age 23 . This is a crude but simplified method to allow for earlier life experience. The OR is greater than two after adjustment for prior psychological distress ( $\mathrm{OR}=2.36$ ), which suggests that early life factors do not entirely account for the social class gradient, and thus current circumstances may influence social inequalities in psychological distress.

Table 3
Odds ratios (social classes IV and V relative to classes I and II) of psychological distress at age 33 among women, adjusted for work-home factors ${ }^{a}\left(n=3,513{ }^{b}\right)$

|  | OR | 95\% CI |
| :---: | :---: | :---: |
| Unadjusted | $3.02^{* * *}$ | (2.19, 4.17) |
| and psychological distress age 23 | $2.36{ }^{* * *}$ | (1.67, 3.32) |
| Work role |  |  |
| and being in paid employed | $2.36{ }^{* * *}$ | (1.67, 3.33) |
| Work characteristics |  |  |
| and psycho-social strain | $2.17^{* * *}$ | (1.53, 3.07) |
| and job insecurity | 2.07*** | (1.45, 2.96) |
| and ever been made redundant | $2.05^{* * *}$ | (1.44, 2.93) |
| and unsocial working hours | $2.07^{* * *}$ | (1.45, 2.95) |
| Home roles |  |  |
| and married or cohabiting | $2.09^{* * *}$ | (1.46, 2.98) |
| and children in the household | $2.09^{* * *}$ | (1.45, 3.02) |
| and sole responsibility 3 or more domestic tasks | $2.10^{* * *}$ | (1.46, 3.02) |
| Home characteristics |  |  |
| and person over 70 in the household | $2.13{ }^{* * *}$ | (1.48, 3.07) |
| and sole child care responsibility | $2.15{ }^{* * *}$ | (1.49, 3.10) |
| and youngest child in household over 6y | $2.00^{* * *}$ | (1.38, 2.90) |
| and 3 or more children in/out the household | $1.96{ }^{* * *}$ | (1.35, 2.85) |
| Additional factors |  |  |
| and low emotional and practical social support | 1.94** | (1.34, 2.82) |
| and partner not employed | $1.99^{* *}$ | (1.37, 2.90) |

a. also adjusted for psychological distress at age 23.
b. of this sample $31 \%$ were in classes I and II, $39 \%$ in IIInm, $7 \%$ in IIIm, and $23 \%$
in IV and V .
${ }^{* * *} p<0.0005,{ }^{* *} p<0.005$.

Following the inclusion of prior psychological distress, work factors were included in the model, then the addition of home factors (roles followed by characteristics). From Tables 1 and 2, we anticipated that adjustment for work characteristics would have a greater impact on the socio-economic gradient than the work role. The adjustment in Table 3 shows that, being employed had no effect, whereas adjustment for work characteristics, especially psychosocial strain and job insecurity, resulted in a weak to moderate reduction in the OR (from OR 2.36
to OR 2.07) even after the inclusion of these prior variables. The OR was virtually unaffected by the further adjustments for home roles, and only one home characteristic, age of the youngest child in the household had an impact on the OR. There was no additional effect of partner's employment status or level of social support. In further analysis (data not presented) we examined the effect of home roles/characteristics before the inclusion of work factors and this did not affect our main findings. Adjustment for all work-home factors reduced the OR from 2.36 to 1.99 , thus a significant substantial class difference in psychological distress remained after taking account of these social roles and characteristics.

## 4. Discussion

A social class gradient is evident in psychological distress in this cohort of women at age 33. This paper assesses the effect that work and home factors have on this social gradient among women. We have attempted to bring together the literature on social roles and psychosocial work characteristics, firstly by extending the number and types of roles, secondly by including those not in paid employment, and thirdly, by examining psychosocial work characteristics and a wider selection of work characteristics. Combining work and home factors is not new, but our study provides a unique focus on the impact of work and home factors on socio-economic gradients in psychological distress. However several methodological considerations need to be addressed before discussing the results.

### 4.1. Methodological considerations

The socio-economic gradient was demonstrated using social class based on the woman's own (current or most recent) occupation as the measure of social position. As this cohort is relatively young, the most recent occupation will not be that distant. The Registrar General's classification has been criticized as inappropriate for women (Rose, 1995), largely because women occupy different jobs than men, and because they are less likely to be employed. However, this criticism applies to other occupation based measures of socio-economic positions (Rose, 1995).

A second methodological issue concerns the classification of the work role as paid versus all other employment statuses combined. Given that women have varied work patterns, it may be that this categorization conceals relationships with a particular employment status. However as was shown in Figure 1, the social gradient in psychological distress is similar for those in full-time and part-time paid work, and although rates of psychological distress were higher in the 'other' category, there were too few women in this group to allow separate analysis.

The third methodological issue involves the use of prior psychological distress at age 23 as a proxy for earlier life influences. This has the advantage of simplifying the numerous earlier life events and influences that needed to be included in our analysis. Although this is a crude method in respect of early life factors, nonetheless, it results in a social class differential of similar magnitude to that derived from a more detailed examination of specific early life factors (Power et al., 2002). Factors that are emerging as important for women include ability at age 7 , age at first child, and level of qualifications achieved by the end of school. The age at which women start their child-bearing is clearly relevant to the present analysis, since it influences the number and ages of children born to the women by age 33. Indeed, the age of the youngest child and number of children are both confounded with age of the woman's first child-bearing within this particular study sample. This inherent problem may account, for example, for the higher risk of distress observed among women with a youngest child of more than 6 years. Nonetheless, in the current paper we have examined several work and home characteristics, which are potentially concealed in the more macro analysis presented elsewhere (Power et al., 2002). The final methodological issue concerns our assessment of multiple roles. Summing the total number of roles is a crude method to assess multiple roles, since it assumes an equal weight to each social role. Nonetheless, others have used this method quite recently (Weich et al., 1998) as it offers the opportunity to summarize substantial information.

### 4.2. Impact of work-home factors

Our study suggests that the social class gradient in psychological distress for 33 -year-old women is due in part to differential work characteristics, but not to home roles and characteristics. Role accumula-
tion did not appear to provide an important explanation for this social class gradient. Underlying these main findings are patterns of association with psychological distress, and with social class which determine the impact of different work-home factors on the socio-economic gradient. Significant bivariate associations were demonstrated between psychological distress and most work and home factors, although the associations were not always strong. Similarly, significant bivariate associations were shown between social class and most work and home factors. However, the impact of work factors on social class differences in psychological distress was weak even when all work factors were considered simultaneously. It was particularly notable that employment status had no impact, whereas work characteristics, such as psychosocial strain and job insecurity did contribute, albeit modestly, to the socio-economic gradient in psychological distress.

What are the possible reasons why these factors are having very little impact? That women in paid employment have a lower risk of psychological distress is in agreement with previous studies (Aneshensel et al., 1981; Gore and Mangione, 1983; Weich et al., 1998). However, as yet the impact of employment on social differences in distress does not appear to have been examined explicitly. Our results suggest that it is not work per se that has an impact on social inequalities in distress for 33 -year-old women, and it may be that the lack of paid work is important only in association with other factors, such as financial hardship, lone parenthood or psychosocial conditions of work. In respect of psychosocial job strain, it is important to note that job strain was originally conceptualized as a risk factor for employed men and it may be less relevant or fails to capture women's work experience. Just over $27 \%$ of women in our cohort at age 33 identified themselves as predominately caring for the home. Women also have a more intermittent work pattern and a large proportion work part time. Previously we compared the social class distribution of psychosocial job strain for employment status groups among women and found similar gradients among full and part-time employed women, yet no gradient for women who looked after the home (Matthews et al., 1998). For psychosocial strain to be a key influence on the gradient we would expect no gradient for women who looked after the home but this is not the case as Figure 1 showed. Therefore, alternative concepts may be needed to capture women's experience. Alternative models of psychosocial work characteristics have been developed (Siegrist, 1996), yet
these focus on paid employment and it is not yet clear how it applies to unpaid work.

The negligible impact that home factors had on the social class gradient in psychological distress among women was surprising. Moreover, the evidence shown here appears to be somewhat contradictory in that relationships were demonstrated between work and home factors and distress (Table 1), and also between these factors and social class (Table 2), yet their impact on the social gradient was negligible. As mentioned in the methods, this was not due to differences in the samples available for analysis. Rather, the contradiction appears to arise because relationships between home factors, psychological distress and social class are not simultaneously of sufficient strength to exert a major effect on the gradient in distress (in many cases the relationships are very modest). There are a number of possibilities for this result. Firstly, it may be that the weak relationships are a function of the life stage examined. However, age 33 is a time when the stresses of juggling home and work commitments would be most: the majority of women are married (cohabiting), have children and are employed. Alternatively, multiple roles may influence the gradient in psychological distress when other resources are scarce, for example among lone parents or those on low incomes (Walters et al., this volume; Khlat et al., 2000). Further work on the 1958 cohort suggests that adult financial circumstances have an impact on the socio-economic gradient in distress among women (Power et al., 2002). Finally, our study does not address the issue of quality of home factors in detail. Focusing on the number of roles rather than the nature and quality of each has been a major criticism of the multiple role theories (Baruch and Barnett, 1987; Menaghan, 1989; Hong and Mailick Seltzer, 1995; Walters et al., this volume). Baruch and Barnett (1987) found for women in midlife that the number of roles did not predict well-being, rather the nature of the experience within a role was important. However, they did not examine the impact of these quality dimensions on the gradient. This is an area still needing development.

Our analysis did not support the role strain hypothesis (Brown and Harris, 1978; Surtees et al., 1983; Williams et al., 1991; Ross and Mirowsky, 1992). Some roles were associated with an increased risk of psychological distress, whilst others appeared to decrease the risk. This was further illustrated with a total score based on the number of work and home roles, which showed declining psychological distress with
increasing number of roles. Most previous studies have limited their investigations to three roles, that of spouse, parent and employee, although there are exceptions in which more than three roles have been examined (Hibbard and Pope, 1987; Hall, 1992; Hunt and Annandale, 1993). Whilst these studies reveal important relationships between psychological distress and for example social support, psychosocial characteristics, having children (young and older), domestic work and occupational status, they do not examine the socio-economic gradient. The only paper that we identified that explicitly examines the contribution of social roles to the socio-economic gradient was a recent paper by Bartley et al. (1999), which examines self rated health. Nevertheless, they showed (as we did) following the inclusion of all their social roles (marital, parent, employee) a significant socio-economic gradient remaining (odds ratios exceeding two in the lower social groups). Given that neither work nor home factors had a substantial impact on the gradient in distress in the 1958 cohort, suggests that other factors are involved in the development of socio-economic gradients in psychological distress.

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# CONFLICT, GENDER RELATIONS AND THE HEALTH OF WOMEN IN TWO LOW INCOME COMMUNITIES IN JAMAICA 

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#### Abstract

This paper examined the conflict, gender relations and bealth of women in two low income communities in Jamaica. To provide a contextual framework, crime and domestic violence were examined at the macro-level. The national data showed that although most types of crime were on the decrease, violence against women did not reflect the same pattern. Primary data were also collected from 96 individuals in the two lower inner cities. The respondents were chosen by "change agents" who were taught conflict resolution skills and were to transmit these skills to the respondents. Approximately 75 per cent of these 96 individuals were involved in conflict during the past three months. Women were more likely to be the recipients of physical abuse. The reasons for this abuse were discussed in five case studies involving domestic violence. This abuse however, has to be understood in relation to gender identities


and relationships, and the struggles of status-deprived males who are trying to contend with the exigencies and limits of inner-city conditions. Whenever there is evidence of gender inequality and male marginalization, the bealth of women is likely to be negatively affected. Both national and community data indicate there are serious problems related to violence in Jamaica and the physical abuse of women.

Keywords: Conflict, Gender relations, Poverty, Women's health.

## Résumé

Cette étude traite des rapports entre les situations conflictuelles, les relations entre les sexes et la santé des femmes dans deux localités défavorisées de la Jamaïque. Pour construire un cadre contextuel, le crime et la violence domestiques sont examinés à un niveau agrégé. Les données nationales montrent que, si la plupart des types de crimes sont en recul, la violence contre les femmes ne suit pas cette tendance. Les auteurs ont recueilli des données de première main auprè̀ de 96 babitants de deux quartiers urbains défavorisés. Les sujets de l'enquête ont été choisis par des «agents de changement» formés à la résolution des conflits et chargés de transmettre ce savoir-faire à leurs interlocuteurs. Environ $75 \%$ des 96 personnes interrogées ont été impliquées dans un conflit au cours des trois mois écoulés. Les femmes sont plus fréquemment victimes de violences physiques que les hommes. Les motifs de ces agressions sont examinés dans cing études de cas de violence domestique. Ce phénomène doit être interprété en faisant référence aux questions d'identité masculine et féminine et aux rapports entre les sexes, et en lien avec les combats que mènent les bommes dépossédés de leur statut pour essayer de faire face aux exigences et aux contraintes de leur cadre de vie dans les quartiers défavorisés. Chaque fois que l'on observe une inégalité entre les sexes et une marginalisation des hommes, c'est sur la santé des femmes que risquent d'en retomber les conséquences négatives. En Jamaïque, toutes les données, nationales et locales, révèlent l'existence de graves problèmes liés à la violence et à la maltraitance contre les femmes.

Mots-clés: Conflit, Rapports entre les sexes, Pawveté, Santé des femmes.

## 1. Introduction ${ }^{1}$

This paper presents some of the findings from a study on 'Conflict Management, Gender and Reproductive Health' sponsored by the Ford Foundation. The main objective of the project was to transmit conflict resolution skills to 'change agents' living in two inner cities (Maverly/Drewsland and Southside). Much conflict revolved around gender issues and impacted in 'gendered' ways, and it was hoped that the development of conflict resolution skills passed on to the communities by the 'change agents', would positively influence areas of gender relations including reproductive health. The skills taught included negotiation, mediation, assertion of self and the use of the "I" statement.

In this paper, the objectives are to:

- outline the national figures on acts of violence experienced by women;
- examine the patterns and types of conflict experienced by women in Maverly/Drewsland and Southside, both in Kingston, Jamaica;
- examine the gender relationships within which these conflicts occurred; and
- examine the impact of these conflicts on the health of women.


## 2. Methodology

Both primary and secondary data were collected to examine conflict, gender relations and the health of women in these two inner cities. The secondary data established the national and community context of violence against women. The primary data were collected to examine the links between conflict, gender relations and the health of these inner cities and the impact of the conflict resolution skills on social and health outcomes.

The inner cities of Maverly/Drewsland and Southside were chosen because:

- they are representative of Jamaican low-income communities, with all the attendant problems; and

[^30]- in these communities there are Non-Governmental Organisations (NGOs) that could be used to facilitate the operation of the project.

The two communities are very similar: they are poor and ridden with crime and violence. The NGOs selected community workers to assist the researchers to identify individuals and families with whom they could work to transmit conflict resolution skills. In the process of working with the families, individuals and community as a whole; information was collected from community members and attempts were made to explore in depth, the relationship between conflict, gender relations and women's health. In this process, a number of case studies were developed; and in this paper, brief stories of violence are presented from these case studies.

## 3. Operational definitions

For the purposes of the Ford project, a number of operational definitions were provided for the benefit of 'change agents' and other data collectors. 'Conflict' was defined within the local context, as any disagreement which caused emotional strain and/or physical injury to an individual. 'Gender' was defined as traits, attitudes, beliefs, preferences and behaviours used to separate boys and girls and men and women. 'Gender equality' was seen as no differentiation in access to power, prestige or wealth and with similar treatment in the socialization process of boys and girls and men and women. The 'health of women' was mainly measured by physical injuries and disabilities, experienced as a result of 'gendered' conflict.

## 4. Theoretical perspectives

Despite the great strides that women have made, there is continuing and increasing violence against women (Oskamp and Schultz, 1998). This violence takes several different forms, e.g. sexual harassment, abuse, rape and pornography. Abuse in heterosexual relationships involves verbal and physical aggression. Although physical aggression can be reciprocal, women are more likely than men, to be seriously injured, during conflict involving the sexes.

The Early Psychological Perspective (based on the writings of Freud), placed the woman as the inferior sex, at best, an appendage to the male. Studies based on this perspective, explained the battering of women in terms of their masochistic tendencies (Horney, 1973). Later psychological studies challenged this view and showed that even the case of a battered woman staying with a batterer, could be seen and understood on a rational basis, without notions of the inferiority of women or of deformed personalities (Kirkwood, 1993).

Wollstonecraft (1994) argued for the recognition of the woman as an individual in her own right and not as an 'incomplete man' operating with a 'rationality' somehow different and inferior to that of males.

Some Feminist Perspectives built on the writings of Wollstonecraft (1994), linked the oppression of women to the patriarchal system. Relations between men and women were seen as based on a struggle for power, as men attempted to control women's bodies, labour and productivity (Young, 1988). In particular, the violence against women was to be viewed as a structural feature of capitalist societies, in which patriarchy was used to control the ownership and the distribution of the means of production. Gender relations were seen as reflecting the mode of economic production. Men, established as heads of the family and the dominant partner, dictated the forms of control to be exerted over women (Tong, 1989). Schuler went on to make the point that "Gender violence is embedded in the context of cultural, socioeconomic and political power relations" (Schuler, 1992).

In current sociological perspectives, it is recognized that violence against women is a feature of gender relations and family dynamics (Gelles, 1976; Hampton and Gelles, 1994; Straus, 1994).

As we examine the conflicts experienced by women in these two inner cities, we ask ourselves which perspective best describes the conflicts outlined, and indicate the most efficient way to deal with this problem. We begin though, with a presentation of the national context of violence experienced by women in Jamaica.

## 5. The national and historical context

There is a perception in Jamaica, and indeed, the Caribbean, that the level of spousal violence is on the rise. To some extent, this may be a reflection of the establishment of institutions to deal specifically with
the victims of abuse. For example, in 1985, the Crisis Centre and the Centre for Women were established in Jamaica, to give counselling to victims of domestic crisis, rape and incest. This was followed in 1990, by the formation of police rape units. These institutions have had an impact on the reporting of violence against women. As Table 1 shows, the number of reports in all categories continues to show an irregular upward trend and increased reporting is especially marked, with respect to domestic violence and crises.

Table 1
Number of cases by telephone calls and office visits to the Crisis Centre for Women - Jamaica

| Type of case | Year |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | 1990 | 1992 | 1994 | 1996 | 1998 |
| Rape | 140 | 156 | 98 | 190 | 172 |
| Incest | 35 | 78 | 45 | 46 | 71 |
| Domestic violence | 135 | 360 | 292 | 496 | 1,443 |
| Domestic crisis | 402 | 1351 | 1,365 | 862 | 2,079 |

Source: Women Crisis Centre.
The increases recorded, however, cannot be attributed entirely to the greater willingness of victims to report violent incidents. Statistics from the Ministry of National Security, reveal that, while there has been a recent reduction in the number of major crimes committed in the island, efforts to reduce the level of domestic violence have had little results. In the first three weeks of 2000 , domestic violence accounted for 37 percent of murders (Daily Gleaner, January 23, 2000). While there appears to be a decline in the incidence of non-fatal acts of violence - stab wounds, gun shots and the disfiguring chemical burns (Table 2).

There has been a slight increase in the number of fatalities resulting from violent acts against women (Table 3). In 1997, murders classified as being the result of domestic violence, accounted for roughly 21 percent of all the murders committed in the island. By 1999, the percentage had risen to 27 .

Table 2
Reported cases seen at public hospitals in Jamaica, 1997 and 1998

| Type of injury | 1997 |  | 1998 |  |
| :--- | ---: | :---: | ---: | :---: |
|  | Male | Female | Male | Female |
| Stab wounds | 2,702 | 951 | 1,884 | 761 |
| Gun shots | 1,149 | 240 | 676 | 148 |
| Chemical burns | 126 | 127 | 94 | 78 |

Source: Health Information Unit, Ministry of Health.

Table 3
Number of persons murdered by gender, Jamaica 1997-1999

| Year | Male | Female | Total |
| :---: | :---: | :---: | :---: |
| 1997 | 929 | 109 | 1038 |
| 1998 | 850 | 103 | 953 |
| 1999 | 767 | 82 | 849 |

Source: Police Statistics Department.

This trend towards increasing violence, is not a Jamaican phenomenon, but has been the subject of comment throughout the Caribbean (Parsad, 1988; Rohlehr, 1988; Danns and Parsad, 1989; Creque, 1994; Gopaul and Morgan, 1998). Bailey et al. (1998), in their study of Family and the Quality of Gender Relations, have shown that partnering relationships in the Caribbean, are increasingly adversarial and aggressive and that violence is the currency of the interaction process. Danns and Parsad (1989), estimate that two out of every three women in Guyana, have been the victims of some form of spousal abuse. Data from Trinidad and Tobago, suggest a ratio of about one in three. In this twin island republic, the number of women killed as a result of domestic conflict, increased from 7 in 1990 to 15 in 1994, and 12 in the first six months of 1996 (Gopaul and Morgan, 1998).

While female acts of aggression against men are not unusual, women are more likely to be the victims of male violent behaviour. Of
course, one cannot understand the dynamics of gender relations, without examining both females and males. Beckles (1996), in looking at some of the Caribbean literature on males, has complained that some of the Caribbean discourses on the 'psychically defeated and socially at risk' male, more often than not, ignore the historical perspective, since historical evidence, is often considered, as providing apologies for the persistence of dysfunctional masculinities. Yet, the broad similarities in responses across the region, would suggest that there is merit in the search for perspectives, that may "identify foundation structures [with] social and ideological continuities" (Beckles, 1996) from the system of New World Caribbean Slavery to now. The principal concern of the slave system was with maternity, fertility and the management of slave household. Slaveholders had no interest in black fatherhood. Moreover, slave masters had the right of sexual access to all their black slave women, and black men could not confront or question this right. Relations of slave man with the woman, could only be established and maintained within a context of force, power and opposition.

It is in the context of a culture of violence, that colonial masculinities took form and this violence, argues Beckles (1996), remains an essential feature of an insecure and subordinate black masculinity. Within the society today, there is a general acceptance of domestic violence as 'natural', and there is a "propensity for acts of domestic violence to take on a theatrical quality and even to provoke amusement and entertainment, rather than concern and intervention" (Gopaul and Morgan, 1998). These violent interactions have become the stuff of the literature of 'the yard' and popular culture forms.

There is today, the continuation of the assumption, that those who wield power, can lay claim to ownership. Men who are superordinated within the productive process, use the power this confers, to exercise control (often by violent means) over women, whom they regard as their possession. In some instances, they view their relationship with women, in the same light as they see their relationship with their children. This is why a male respondent, interviewed by a newspaper reporter, felt that he had to make the point, that what the news reporter called "...domestic violence" was more properly termed "domestic discipline..." (Trinidad Guardian, October 1, 1996). This perspective on violence and gender relations, is also represented in the views of male participants in the focus group discussions, as reported by Bailey et al. (1999):
"You have certain guidelines you want them to follow, right. You have certain things that you want them to do. So, in order fi dem do it, you have to teach them the way you want them fil live. That mean seh, you have fi catch dem from early."
"You just have fi deal with them. Sometimes you deal with them nice and you deal with them rough. According to how you mould them."
Moulding involves the use of violent measures. So, violence is a part of the traditional cultural values of the West Indian male. What, therefore, accounts for the reported increase in violence against women? In relationships between men and women, there is the expectation that men will be the providers, and the most significant financial demands made on men, result from children (Bailey et al., 1998). Although sociological studies of the West Indian family, portray the West Indian father as 'irresponsible' and neglectful of his financial responsibilities, there is evidence to suggest that fathers define their roles, in terms of the provision of the basic needs of the family. Money is exchanged for respect and loyalty and a great deal of conflict results, when this equation is not in balance (Bailey et al., 1999). The women in the inner city of Kingston, who participated in the study by Bailey et al. (1998), confessed that they would submit to male tyranny, only if they were economically dependent on their men. Men who could no longer provide them with material possessions, should not expect to control actions they took, in order to survive. This attitude puts strains on relationships, especially in the context of high levels of unemployment among males.

For well over a decade, the economy of Jamaica has been declining. The debt burden is now estimated to be roughly 169 percent of GDP. Unemployment has been increasing at all levels and sectors of the economy. The numbers employed in manufacturing alone, declined by almost 10 percent between 1992 and 1997. Bailey et al. (1999), reported that the male participants in their focus group discussions, saw unemployment as undermining their ability to meet their obligations:
"We need strong, regular work, to keep up with the demands."
"We really need training and work, okay, for a father to be a father... and you get two days work today and you don't get any next week, you in trouble."
"Sometimes a man want to do something but he can't. So him just pretend like him nuh want fi do nutten."

The economic deterioration affects the employment of women also, as a significant area of decline, has been in the apparel industry, concentrated in the island's free zone, which attracts many of the island's 'unskilled' women.

At the same time, economic strides being made by middle class women, are also challenging the traditional power base. These gains in the area of education and professional training are shown in Tables 4 and 5.

Table 4
Student registration at the University of the West Indies

| Year | Males | Females | Total |
| ---: | :---: | :---: | :---: |
| $1979 / 80$ | 4,782 | 4,229 | 9,011 |
| $1984 / 85$ | 5,007 | 5,565 | 10,572 |
| $1989 / 90$ | 5,403 | 6,777 | 12,180 |
| $1994 / 95$ | 6,303 | 9,888 | 16,191 |
| $1997 / 98$ | 7,555 | 13,442 | 20,997 |

Source: Statistical Yearbook of Jamaica 1998.

Table 5
Output of professionals, senior officials and technicians from tertiary institutions, Jamaica 1996-1998

| Occupation | 1996 |  | 1997 |  | 1998 |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Male | Female | Male | Female | Male | Female |
| Teachers | 271 | 1,226 | 280 | 1,446 | 286 | 1,102 |
| Medical doctors | 25 | 38 | 26 | 39 | 21 | 25 |
| Nurses | 1 | 202 | 0 | 296 | 1 | 284 |
| Lab. technicians | 6 | 8 | 1 | 8 | 0 | 1 |
| Dental nurses/Assistants | 0 | 13 | 0 | 14 | 0 | 18 |
| Accountants | 71 | 165 | 86 | 182 | 119 | 283 |
| Managers/Administrators | 227 | 729 | 289 | 720 | 436 | 1,196 |
| Engineers | 30 | 13 | 45 | 14 | 73 | 16 |
| Attorney | 6 | 23 | 17 | 52 | 8 | 39 |

[^31]What has been described as the 'under-performance' of the West Indian male, has been the subject of much popular and academic debate. Miller (1991), sees the gains that women are making, as resulting in the 'marginalization' and 'emasculation of the male'. Figueroa (1996), argues that under-performance is one of the unforeseen and unhappy consequences of the historical male 'privileging', now a mocking misnomer. In any event, although these developments have given a relatively small percentage of Jamaican women greater financial independence, than they enjoyed in the past, they challenge deep-rooted notions of masculinity and are the basis for inter-gender and family conflict.

These strains are felt much more strongly, at some points in the social structure. The men in the study by Bailey et al. (1998), voice their unease, once they cease to be 'gatekeepers to resources women need' (Handwerker, 1992a, 1992b):
"Mek ah tell you the truth. You can't be in a relationship with a woman who have more money than you... it's better that you have the power more than them."
"Through you inna dem house, you can't talk to dem certain way - you can't raise your voice pon dem."
"The woman must heed what a man say... the woman must hear you... I like to dictate."
Spousal abuse is only one of the manifestations of stress. Children caught up in this situation, are increasingly at risk. Those who come to the assistance of an abused parent, may suffer injury or death. The reality of childcare, in situations where nurturing is regarded as the job of women (and consequently little support from men), is physically and emotionally demanding, and infants are often at risk. Of the six infants killed as a result of violence, in the first three weeks of 2000, three were the victims of domestic violence. Among the violent acts responsible for homicide involving infants (Daily Gleaner, January 23, 2000), are burning, beating and starvation.

Another manifestation of stress within families, is the alarming increase in suicide rates, a largely male phenomenon. The number of cases of suicide, jumped from 3 in 1991 to 36 in 1995 and 72 in 1998 (Economic and Social Survey, Jamaica, 1991-1998). Some of the situations that result in violent confrontations, are revealed in the study of two communities.

## 6. Conflict stories in two lower income communities

Interviews were conducted among a sample of 96 respondents, in two low-income communities in the Kingston and St Andrew Metropolitan Area (KMA), in Jamaica. Respondents were questioned about their experiences with conflict during the preceding three-month period, both in the community and within the context of the family.

About 75 percent of the sample had been involved in conflict, with 52 percent characterizing the frequency as often or sometimes. Table 6 shows the forms of conflict experienced by the respondents, within the family setting. Women were more likely to be recipients of physical abuse. Some of the violence of men was directed at women and the inter-gender conflict, resulted in the woman suffering physical abuse:
"You and her wake up... and a little argument start and... she ah come back and nag you and you get ignorant and lick her."
"Violence is caused by a simple little thing because you have some woman who nag you for nothing... just nag yuh, nag yuh, nag yuh and you get tired ah her and say 'ah what happen to you?' and them love to tell you 'come suck' and you ah get ignorant and beat her." (Bailey et al, 1998)

Table 6
Forms of conflict experienced within the family (\%)

| Forms of conflict | Male ( $\mathrm{N}=55$ ) | Female $(\mathrm{N}=41)$ |
| :--- | :---: | :---: |
| Quarrel | 50.0 | 60.7 |
| Verbal abuse | 23.7 | 15.0 |
| Physical abuse | 12.7 | 19.9 |
| Wounding | 13.6 | 2.4 |
| At least two of the above | 20.0 | 2.0 |

The female survivors of violence had stories, some of long-term physical abuse:

Miss A, aged 21, lives in the community of Maverly. She has a secondary education and is employed as a cosmetologist. She has a visiting relationship with the father of her child and although she does not expect him to support her, she expects him to share the financial
responsibility of raising their child. However, financial support is irregular. On two occasions during the preceding three months, she was forced to seek him out, to obtain money for the child. On both occasions, he physically abused her and she sustained minor bruises.

Miss B is a 22 year-old housewife, who also lives in the community of Maverly. This high school graduate lives with a 'common-law' partner, with whom she has two children. On one occasion, she went to the grocery, leaving her children with a nephew, who left the children alone. Her 'common-law' partner was very upset when he returned home and found the children on the street and assaulted her with a stick. She retaliated by threatening him with a knife. She sustained injuries on her legs.

Miss $C$ is 18 years old and lives in the inner city community of Southside, with a 'common-law' partner. She has a primary school education and has borne one child for her partner. In a quarrel with her partner, he made comments that she felt, put her mother in a bad light. She was very offended and a fight broke out. She did not say who started the fight, but both sustained injuries and the respondent reported the incident to the police.

The fourth respondent, Miss D, is an unemployed factory worker, aged 22, who lives in the community of Drewsland/Maverly and has two children for her common-law partner. A quarrel with her partner arose as a result of a 'difference of opinion'. He does not like her to express opposing views and, in the fracas that ensued, she sustained cuts and bruises.

The final case involves a 15 year-old student, who lives with her mother and stepfather in Drewsland/Maverly. This was a case of chronic violence, as her stepfather quite often beat both her mother and herself. On the most recent occasion of a conflict involving her parents, she intervened on the side of her mother. Her stepfather beat her and she sustained a broken hand.

These are two poor inner city communities, where the women are either unemployed or engaged in low paying jobs. The injuries the women sustained during conflict, resulted from the male in the house, attempting to exert power over the activities in the house. Interestingly enough, none of them complained about the beatings, when they were asked to outline the things they disliked about their partners. The findings showed that when there is limited communication, physical abuse becomes the norm. Unfortunately, it was outside the scope of this
study, to examine the impact of conflict on the mental health of the respondents. However, studies have shown that injuries to women, do create severe psychological and emotional damage to them and their children (Ffolkes, 1992; Mamay, 1990; Gomez, 1997).

## 7. Relations and conflict

The literature and research on gender in the Caribbean, have indicated a sharp and fundamental divide between the gender identities of males and females. In addition, there are also indications that individuals experience gender identities, as a central aspect of the self - both of the private and social self (Bailey et al., 1998; Brown and Chevannes, 1995; Smith 1996). Further, many have argued that, given historical and current social conditions, for some males who have experienced forms of social marginalization, one response to status deprivation and loss, is the development of an exaggerated reputational emphasis, in which there is a great reliance on a 'restricted' masculinity and on significant elements of machismo (Bailey et al., 1998; Brana-Shute, 1979; Branche, 1998; Miller, 1991; Wilson, 1969).

In lower-class inner city communities, given the exigencies of daily living and the limited symbolic spaces and options, and given few mechanisms for constructive conflict resolution, inter-gender relations can often be toxic, with males 'disadvantaging' females, in both verbal and physical ways. It is precisely this pattern, observed in communities throughout the Caribbean (Bailey et al., 1998), that provided the basis for the current interventionist phase of the Ford project. The project is attempting to train community workers in conflict resolution skills, in the hope that they can successfully transmit these skills to their community members, with positive consequences for gender relations and health outcomes.

As the situation stands at the moment, however, it is still possible to observe national and community patterns of inter-gender relations, in which women and children are abused by their young and adult status-deprived male folk, without the same or equivalent responses from women. The abuse of women is not simply a matter of the individual woman, but is a matter that affects as well, her reproductive health profile and therefore impacts on the future generation and on children currently in her care. These larger ramifications must be un-
derstood, especially in the context of lower income, inner city communities where, within a variety of matrifocal family forms (Patterson, 1982, Smith 1996), single-parent female-heads struggle to hold things together.

## 8. Summary and conclusions

Both national and community data indicate that there are serious problems related to violence in Jamaica and the physical abuse of women. The primary data showed, that the feminist explanation for the physical abuse of women, become relevant. This abuse has to be understood in relation to gender identities and relationships, and the struggles of status-deprived males, who are trying to contend with the exigencies and limits of inner-city conditions. A historically conditioned 'restricted' masculinity or a machismo identity/ideology, offers one response of these men to their circumstances. It impacts negatively on females, and given the matrifocal family structures of many Caribbean communities, it adds to the burden of being female. Indeed, in this context, physical abuse has several negative consequences for children, both those unborn and those currently in the care of the women.

The case studies for the inner city, reflect the poverty and inequality within which the women live. With limited education and no access to high paying jobs, these women are vulnerable. They depend on the men in their lives for financial support, which is not always forthcoming. This dependency inflates the sense of power that the men feel and exert. In these cases, unequal gender relations, result in the physical abuse of the women. Until their financial and emotional dependencies on the men are reduced, improved gender relations remain elusive. The health of the women will remain at risk.

The data now available in this Ford project, have not fully identified all the health outcomes that women experience, as they deal, on a daily basis, with toxic inter-gender conflict. There are enough indicators however, that the consequences are many and are significant.

The Ford project, in this phase, is about intervention and providing a community, through 'change agents' or community workers, with conflict resolution skills, to help enhance conflict management and gender relations. At this stage in the project, it is patently clear, that the
basic and underlying problem, is a massive social and cultural one and that the work of the 'change agents' will be challenging.

These results inform policy. There is a need for more conflict resolution skills to be taught to both men and women in Jamaica, especially to those who live in low-income communities. However, macroeconomic improvement is necessary, to reduce the levels of poverty in these countries. Women must have more access to education and employment. Only then, will their emotional and financial dependency on the men be reduced. Health officials, especially those whose business is mental health, need to focus more on the health of women, in order to inculcate in them, a sense of self-worth and self-identity. Only when these policies are in place, will the health of women be improved naturally and especially in the low-income communities.

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# HOW GENDER AFFECTS <br> PATTERNS OF SOCIAL RELATIONS AND THEIR IMPACT ON HEALTH: A COMPARISON OF ONE OR MULTIPLE SOURCES OF SUPPORT FROM 'CLOSE PERSONS’ 

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#### Abstract

Numerous studies have reported gender differences in the effects of social relations on morbidity and mortality. When studying health and associated factors, one cannot ignore that sex differences exist and methods that are not "gender-fair" may lead to erroneous conclusions. This paper presents a critical analysis of the bealth/ social relations association from a measurement perspective, including the definitions of people's networks and how they differ by gender. Findings from the Whitehall II Study of Civil Servants illustrate that women report more close persons in their primary networks, and are less likely to nominate their spouse as the closest person, but both men and women report the same proportion of women among their four closest persons. Women have a wider range of sources of emotional support. To date,


[^32]most epidemiological studies have habitually analysed support provided by the closest person or confidant(e). We compared the bealth effects of social support when measured for the closest person only and when information from up to four close persons was incorporated into a weighted index. Information from up to four close persons offered a more accurate portrayal of support exchanged, and gender differences were attenuated, if not eliminated, when this support index was used to predict physical and psychological bealth.

Keywords: Social support, Gender, Health, GHQ, Close persons questionnaire.

## Résumé

De nombreux travaux ont mis en évidence des différences de genre dans l'impact des relations sociales sur la morbidité et la mortalité. En étudiant la santé et les facteurs qui lui sont associés, on ne peut ignorer l'existence des différences de genre, et des méthodologies qui ne seraient pas «équitables quant au genre» pourraient conduire à des conclusions erronées. Cette communication présente une analyse critique de l'association entre santé et relations sociales sur le plan de la mesure du phénomène, y compris les définitions des réseaux de relations sociales des individus et leurs variations selon le genre. Les résultats de l'enquête "Whitehall II» sur les fonctionnaires britanniques montrent que les femmes déclarent un plus grand nombre de proches dans leurs réseaux primaires et sont moins enclines à désigner leur mari comme la personne qui leur est la plus proche ; mais hommes et femmes déclarent la même proportion de femmes parmi leurs quatre relations les plus intimes. Les femmes ont un plus large éventail de sources de soutien affectif. Jusqu'à présent, la plupart des études épidémiologiques ont analysé l'aide apportée par la personne la plus proche ou le confident. Cette communication compare les effets du soutien des proches sur la santé selon que l'on se limite à la personne la plus proche ou que l'on inclut jusqu'à quatre relations dans un indice pondéré. Prendre en considération plusieurs relations permet une description plus précise des flux d'entraide, et les différences de genre sont atténuées, sinon éliminées, quand on utilise cet indice pondéré pour prédire l'état de santé physique et psychologique.

Mots-clés : Entraide sociale, Mesure, Genre, Santé, GHQ, Questionnaire sur l'entourage.

## 1. Introduction

Men and women are different. When studying health, illnesses or risk and protective factors among men and women, one cannot ignore that sex differences exist. Misclassification due to measurement methods that ignore the different behaviours, psychology and physiology could lead to erroneous conclusions for men or women, or both.

This paper considers the notion of "gender-fair measures". While we know that culture, biology and psychology interact to influence behaviour, a key issue is whether we should define the entities we study to reflect diversity, or use the same set of factors to measure the construct in both men and women. Indeed, the manifestations of appendicitis or a broken leg are inherently the same for men and women. In contrast, while a core set of signs and symptoms of depression are usually observed for depressed men and women, other expressions of depressive states are gender-based.

Social roles and relationships can be thought of as primarily culturally determined. It remains unclear whether social interactions fulfil the same needs or operate in the same way for women and men. The importance of the social environment to health and well-being can be traced to ancient times in the writings of Aristotle, in the biblical prescriptions of societal rules and legislation and recommendations, and has been observed across diverse societies up to the present time. While many of these accounts study men and women separately, the epidemiological literature has not sufficiently scrutinised whether the measures of social relations are "gender free", or "gender fair".

The intention of this paper is to contribute to the following debate: should we use alternative ways of defining and measuring social relations for men and women? The question is not about social relations per se; the issue is whether defining and measuring any construct should be identical for men and women, when we are already informed by other disciplines that gender differences exist. However, the concern remains that if different definitions and measures are used for men and women, this makes it impossible to measure the extent of gender differences in our results. We take a provocative stance and suggest that if gender differences are not incorporated in the construction and evaluation of some instruments, we might be falsely attributing to gender nothing more than inadequate precision and divergent validity. If, for instance, an association is found between a risk factor
and health for men, but not for women, this may reflect a problem with the measurement of the risk factor in women, rather than the absence of its effect in women.

### 1.1. Social relations: social networks and social support

The concept of social relations is multifaceted, and includes the diverse set of interpersonal relationships and exchanges that people engage in both within and between families, friendships and "group affiliation" (Antonucci, 1994). Kahn and Antonucci (1980) deconstruct social relations into three types of support: affect, aid and affirmation. Social relations may include the degree to which an individual's need for affection, esteem or approval, belonging, identity and security are met by significant others (Kaplan et al., 1977). This concept may also embrace whether he or she is cared for or loved, that he or she is esteemed or valued, and that he or she feels they belong to a network of communication and mutual obligation (Cobb, 1976). When social relations are examined from a life course perspective, some authors (Antonucci and Jackson, 1987; Bandura, 1986) claim that social relations are effective because they help people develop a feeling of competency or personal efficacy.

The term social relations covers multiple constructs, although the simple proposal by House and Kahn (1985) to differentiate structure and function as the two essential components is both parsimonious and adequate. The structure of social relations consists of the more objective characteristics of the "social network", i.e. its size, relative composition in terms of gender and family/friend balance, network density, frequency of contacts, marital status, etc. The function of social relations, often referred to as social support, refers to the actual or perceived type of support received, provided or exchanged.

While definitions of social support and social networks vary, the ways of measuring these constructs are even more variable (Antonucci, 1985). Some studies ask about availability of support in general terms, others ask about support from specific role-defined persons, in particular spouse, confidant(e), children, and parents, while others ask about support received with no identification of its source. It is assumed that the larger the network (i.e. the structure), the greater its potential for providing functional support. Seeman and Berkman (1988) examined this assumption in an urban community sample of older adults ( $\geq 65$
years old) and found that network size, number of face-to-face contacts, and number of proximal ties were associated with greater availability of both emotional and instrumental support. They also found that the presence of a confidant was associated with both emotional and instrumental support, whereas the presence of a spouse was not. Unfortunately, their results are presented adjusted for sex, but neither the independent effect of sex nor the possible interactions of sex with certain types of social ties were shown. Hence, one does not know whether the findings are comparable for men and women.

Both popular culture and empirical studies tend to share the belief that women have more extensive and better social relations than men. Women, as opposed to men, are more likely to have larger and more varied networks, as well as more likely to report having a close confidante and that the confidante is someone other than their spouse (Antonucci, 1994). Women also provide and receive more support and have a wider "net of concern" than men, that is to say, they spend more time involved in responding to requests and support from other people (Kessler et al., 1985). Furthermore, women can more readily mobilise support when in need (Belle, 1989) and men tend to have fewer emotionally intimate relationships than women. All this may mean that women would benefit more in health terms from social support than men.

### 1.2. Social relations and health

The relative contribution of social relations to health and mortality has been reported from numerous studies using different definitions of social relations, different health outcomes and diverse samples. The magnitude of the reported effects varies according to the methodologies employed; nonetheless, there appears to be a consistent association between inadequate levels of social relations and poor physical and mental health. The apparent consistency and magnitude of these findings are such, that House et al. (1988) proposed that "insufficient social support" should be considered an important risk factor for ill-health and mortality.

Many explanations have been proposed to describe how and why social relations impact upon health. Social support may have both direct effects on health or may buffer the negative effects of life events and chronic stressors (Cohen and Wills, 1985). Social support may act
directly to increase our sense of control over the environment. In this way, it may dampen physiological arousal, strengthen immune responses, and promote healthy (or occasionally unhealthy) behaviour. In addition, social support may act indirectly, to alter the appraisal of threatening events and may provide both emotional support and tangible resources to deal with life crises.

Supportive networks are considered to provide a health benefit, and their absence to be detrimental to health, but less is known about the health consequences of negative interactions with network members. Rook (1990) has proposed three forms of negative interactions: unwanted or aversive contacts, ineffective support and social pressure to adopt or maintain unhealthy behaviours.

### 1.3. Social relations, health and gender

Many of the early studies of social relations and health were limited to men, and some to white men only (Welin et al., 1985). When analyses are performed separately by gender, research has often found a weaker or non-existent association between social support and ill health or mortality for women. Many studies show an advantage for men that is not observed for women (House et al., 1982; Kaplan et al., 1988; Schoenbach et al., 1986), although some studies report an equivalent effect of social support on mortality in both men and women (Berkman and Syme, 1979; Orth-Gomer and Johnson, 1987).

In a comprehensive review of social support and physical health, Shumaker and Hill (1991) examined the available evidence for gender differences and discussed the possible factors that may account for these observed gender differences. They contend that the associated factors are related not only to the definitions of support and health that are used, but also to the possible mechanisms linking social relations to health that may differ for men and women.

While the majority of published reports have examined the effect of social relations on physical health and mortality, an extensive literature also exists on the effects of social relations on mental health and well-being. Cross-sectional studies show a clear negative association between levels of support and psychiatric disorders in both men and women, in community and patient samples (Aneshensel and Stone, 1982; Lin et al., 1979; Williams et al., 1981). Longitudinal studies suggest that lack of support while individuals are depressed predicts poor out-
come (Brugha et al., 1990; Fondacaro and Moos, 1987; Paykel, 1994). Individuals with better support, or with larger networks, or who are married report better mental health and less psychological distress. The positive effect for marital status on mental well-being is stronger for men than for women. Furthermore, several authors report that network interactions are more strongly associated with women's mental health than with men's. Antonucci and Akiyama (1987) note that for both men and women, quality of social support has a stronger effect than quantity, however the magnitude of the combined effects of quality and quantity has a greater impact on women's mental health. Likewise, Kessler et al. (1985) and Schuster et al. (1990) found that depression in women was correlated with both lack of emotional support and negative interaction with partner, relatives and/or friends, while for men only negative interaction was associated with depression. Due to the cross sectional design of most of these studies, the direction of causation cannot be inferred.

In the first analyses of social support using the Close Persons Questionnaire (Stansfeld et al., 1998b; Stansfeld and Marmot, 1992) among British Civil Servants in the Whitehall II Study (Marmot et al., 1991), we found that low confiding and poor emotional support from the person identified as closest by the participant, predicted psychiatric disorder in men, though not in women. Similar gender differences were obtained for the SF-36, a measure of physical and mental functioning (Martikainen et al., 1999; Stansfeld et al., 1998a). The absence of a protective factor for women was unexpected. Confiding in the closest person without receiving accompanying emotional support conferred greater risk of psychiatric disorder in women than men, and may partly explain the observed gender difference in the effectiveness of confiding/emotional support. However, this seemed unlikely to be the full explanation.

### 1.4. Gender and social relations

A critical analysis of our earlier Whitehall II findings included the examination of the definition of respondents' networks and, if and how, those differed by gender. Women report more close persons in their primary networks and are less likely to nominate their partner as their closest person (Fuhrer et al., 1999; O'Connor and Brown, 1984). Thus, women should have a wider range of sources of emotional sup-
port than men. In order to examine whether measurement of support from only the closest person or up to four close persons generates different effects on health, we conducted further analyses on the Whitehall II sample. In a first analysis, we found that by incorporating support from up to the four closest persons, low confiding/emotional support was predictive of "psychiatric disorder" in women (Fuhrer et al., 1999); this result differs from the absence of an association observed when using only information about the first close person. In contrast, one notes the consistency of the associations observed in men using either the first close person or up to four close persons. These results are concordant with the literature from social psychology delineating different patterns of social relations in men and women (Knipscheer and Antonucci, 1990).

The objective of the present paper is to examine different approaches to measuring social relations to ensure "gender-fair" comparisons when analysing the impact of social relations on health. This is accomplished by comparing gender differences in the components of the Close Persons Questionnaire when assessed for the closest person only vs. weighted scores that combine information on up to four close persons, including the spouse. We then contrast the two ways of scoring the Close Persons Questionnaire by modelling each component's ability to predict satisfaction with relationships, adjusted for age, marital status, grade of employment and the other components in the model. Results of the comparison are also examined to see whether the measures render different findings in their longitudinal relationship to two health outcomes.

## 2. Methods

### 2.1. Sample

The Whitehall II Study was established to investigate the social gradient in morbidity and mortality (Marmot et al., 1991). It is a cohort study of 10,308 male ( $67 \%$ ) and female ( $33 \%$ ) civil servants who were working in 20 London Based Civil Service departments and examined between 1985 and 1988 ( $73 \%$ baseline response rate). All the study subjects were invited to participate in every subsequent follow-up phase, irrespective of continued Civil Service employment. The data
presented in this paper are taken from those participants who completed Versions 3 and 4 of the baseline questionnaire at Phase 1 ( $n=$ 7,697); the first 2,611 participants completed earlier versions of the questionnaire that did not include several of the social support questions, and have therefore been excluded from these analyses. The sample used for the analyses includes 6,007 office-based civil servants aged 35 to 55 years at study entry who also returned the postal questionnaire with the General Health Questionnaire (GHQ) (Goldberg and Blackwell, 1970) duly completed at Phase 2 (1989), a follow-up response rate of $78.0 \%$. However, due to missing values for some of the social support items, analyses are restricted to 5,793 persons ( $31 \%$ women) for whom we had complete data for the principal variables. At the baseline screening survey (Phase 1) participants completed a detailed questionnaire that included sociodemographic, psychosocial, occupational and medical history data, and a physical examination was performed (Marmot et al., 1991).

Participants at Phase 2 were more often men, older and in higher employment grades than those who did not participate, although gender was not associated with follow-up participation after adjusting for grade. Participation rate increased with age for men, but age was not a factor in women's participation.

### 2.2. Measuring support exchanged with close persons

At Phase 1, participants completed questionnaires both about social networks and social support. They were asked to respond to questions about size of network, frequency of interactions, group membership, church attendance, social support in the workplace, as well as the Close Persons Questionnaire (Stansfeld and Marmot, 1992). The Close Persons Questionnaire assesses support received from and provided to a maximum of four nominated close persons. Subjectively defined degree of closeness is the criterion for inclusion as a close person, unlike some scales, where closeness is defined by the social role of the person, although this role is recorded. The respondent is first asked to record the number of persons he/she "feels very close to", and then is asked to specify the first closest person, the role of that person, and their gender. This is repeated for up to four close persons. Fifteen questions assess "qualitative" types of support from and to each of the
close persons and the questions start with the phrase "How much in the last 12 months did this person ..."

In the validation study of the Close Persons Questionnaire, three subscales were derived from the 15 items using factor analysis (Stansfeld and Marmot, 1992). Seven items constituted the confiding/emotional support subscale, three items were included in the practical support subscale, and four items were included in the negative aspects of close relationships subscale. (The items from the questionnaire are shown in Appendix A and full details of the questionnaire can be obtained from the authors.)

The Likert-scaled responses for the items of each subscale were totalled for each close person nominated. The responses for each item were: not at all, a little, quite a lot, a great deal (coded 0 to 3). Three components were derived from the above questions: (1) confiding/ emotional support, (2) practical support, and (3) negative aspects of relationships. The component scores were then divided into tertiles. In view of the different distributions and mean scores by gender, the tertiles were determined separately for men and women. Previous analyses of the Whitehall II cohort have used the subscales for the first close person only (Stansfeld et al., 1998a; Stansfeld et al., 1998b). In order to reflect a more accurate picture of social relations of both men and women, in this paper we extended our work on the assessment of support by incorporating the responses for all close persons nominated. We generated a cumulative weighted total score for each subscale across the number of close persons nominated, with the most weight given to the first close person, and with progressively decreasing weights for each additional person (up to 4 persons). This approach allowed us to incorporate support exchanged with several close persons, with relatively less contributed by each person once, twice or three times removed from the closest person. The total is calculated as a function of the number of persons nominated, though the weights are independent of the number of persons nominated.

In an initial approach we assigned a priori weights (Fuhrer et al., 1999). The score for the first close person was assigned a weight of 1.0; the score for the second close person was assigned a weight of 0.25 ; similarly, the third and fourth close person's scores were assigned weights of 0.15 and 0.10 , respectively, and will be referred to as Cumulative Index A. The weights were chosen to reflect proportionally
greater importance of support provided by the first close person compared to the other persons nominated.

Nonetheless, the weights were arbitrarily chosen as a first attempt to amalgamate information about several sources of support. We then examined the stability of our results with different weighting schemes. We used response patterns from the data to inform the next choice of weights, and noted that there were significant differences in the mean score for each person as a function of the number of close persons nominated. This is illustrated in Figures 1, 2, and 3 that present the mean score for support provided by each close person according to the number of close persons nominated. In each figure the uppermost curve shows the support provided by the close person nominated first, as a function of the number of persons nominated. Similarly, the next curve is for the second closest person, and so on. For confiding/emotional support (Figure 1) we observe a significant increase ( $p$-value for linear trend $<0.0001$ ) in support provided by each close person as the number of persons nominated increases, and this finding does not differ by gender. The same trend is observed for practical support, but only among men (Figure 2). For negative aspects of close relationships, mean scores do not differ according to number of persons nominated (Figure 3). Most confiding/emotional support is provided by the first

Figure 1
Confiding/emotional support from each close person according to number of close persons nominated (age adjusted)


Figure 2
Practical support from each close person according to number of close persons nominated (age adjusted)


Figure 3
Negative aspects of close relationships from each close person according to number of close persons nominated (age adjusted)

person (Figure 1). The second person provides approximately $60 \%$ of that reported for the first, the third and fourth person even less. We used the ratio of support provided by the second, third and fourth close persons relative to the first close person to derive the respective
weights for compiling the total support score. This finding was then combined with an iterative procedure where we varied the weights, recalculated the best, intermediate and worst tertiles of support and compared the associations with relationship satisfaction for the closest person and each weighted index. The results of this sensitivity analysis led us to choose the weights of 1.0 (Person 1), 0.60 (Person 2), 0.45 (Person 3), 0.30 (Person 4) for the cumulative social support index, referred to as Close Persons Cumulative Index B.

### 2.3. Other measures

Some gender differences have been reported for satisfaction in different domains, including satisfaction with personal relationships (Briscoe, 1982). Relationship satisfaction was assessed by the following question: "All things considered, how satisfied or dissatisfied are you overall with your own personal relationships? Please circle one of the numbers on the 1-7 scale below to show how satisfied or dissatisfied you feel". Responses were on a seven-point scale from very dissatisfied (1) to very satisfied (7), and then dichotomised to dissatisfied (little, moderately or very dissatisfied) versus satisfied (neutral, little, moderately or very satisfied).

A social network index, that we adapted from the Berkman/Syme Social Network Index (Berkman and Syme, 1979), is the sum of all the items assessing structure and contacts (i.e. number of people in network, frequency of contacts, group membership, church attendance); unlike Berkman's original index, this version does not however, incorporate marital status in the index construction. This network index reflects social connectedness as measured by the network structure and network interactions, and was included to describe social network patterns by gender.

Marital status was coded as married/cohabiting, versus not married (never married, separated, divorced, widowed). Social class was defined by civil service grade of employment, a measure reflecting both income and status. There were three categories: Administrative (highest), Executive/Professional (intermediate) and Clerical/Support (lowest). There were clear differences in other socioeconomic indicators (highest level of education, housing tenure, access to a car and father's occupation) by grade of employment (Marmot et al., 1991), illustrating the validity of grade of employment as a measure of social position.

### 2.4. Health outcomes

### 2.4.1. Physical health

Self-reported health at Phase 2 was selected as a measure of overall physical health. This simple measure has been shown consistently across many cultures to predict mortality (Idler and Benyamini, 1997). Participants were asked to assess their health over the preceding 12 months. They selected among 5 response categories (very good, good, average, poor, very poor); for the present analyses, we dichotomised the responses to average or worse compared to good or very good.

### 2.4.2. Psychological distress

Psychological distress was measured by the 30 -item General Health Questionnaire (GHQ) (Goldberg, 1972), a self-report instrument that assesses current mental state. The questions ask about symptoms of depression, anxiety, sleep disturbance, and social functioning that the respondent has experienced during the preceding four weeks. For each item, there are four possible responses that are coded 0 (not at all, no more than usual) or 1 (rather more than usual, much more than usual); the 30 items are totalled; the range is from 0 to 30 and the higher the total score, the higher the level of psychological distress. "Caseness" threshold, indicative of clinically significant psychiatric morbidity, is defined by a GHQ score of 5 and above which was validated in a subsample interviewed with the Clinical Interview Schedule (Goldberg and Blackwell, 1970; Stansfeld and Marmot, 1992). The sensitivity of the GHQ was $73 \%$ and the specificity was $88 \%$ against the Clinical Interview Schedule. The present analyses use the GHQ at Phase 2 as the mental health outcome measure.

### 2.5. Statistical analysis

Differences in means were compared using analysis of covariance with age groups and employment grade levels fitted as categorical variables in the adjusted analyses. Due to the demographic differences by gender in our sample, we adjusted for marital status and grade of employment at Phase 1 as potential confounders. Adjusted means were computed as the least squares means produced after fitting the analysis
of variance models. These models were also used to calculate tests for trend across factor levels by fitting these terms as linear, rather than categorical, variables. Differences in proportions were assessed using the Cochran-Mantel-Haenzsel test of association.

Logistic regression models were used to examine the association between dissatisfaction with social relationships as the dependent variable and the Close Persons Questionnaire cumulative index, as well as the score for the first closest person, as the predictor variables. Logistic regression models were also used to estimate the predictive effects of the social relations measures on subsequent self-reported health and psychological distress (measured by GHQ caseness), after adjusting for the confounding effects of age and marital status at baseline. In addition, the independent effect of each of the three social relations components (confiding/emotional, practical, negative aspects) was examined by including all three components, as well as age and marital status in a single model. Due to the large differences in sample sizes for men and women, we have focussed on the comparability of the effects' magnitude rather than on their levels of significance. All analyses were conducted using the statistical package SAS 6.11 for Windows 95 (SAS, 1990).

## 3. Results

The results of this enquiry into "gender fair" measurement of social relations are presented in three parts. First, comparative descriptives of the principal variables are presented. Second, the effect of the different types of support (confiding/emotional, practical, and negative aspects of relationships) on dissatisfaction with personal relationship are shown by gender and source(s) of support. Third, the effects of different types of social support on health (self-assessed and psychological distress) are reported. Findings are reported by gender for the closest person nominated, as well as for the weighted cumulative index based on up to four possible close persons.

Table 1 shows gender-specific means and proportions of the variables examined in this study. Women are on average older than men ( $53 \%$ vs. $45 \%$ above $45, p<0.001$ ), and women are much more frequently in lower grades of employment ( $48 \%$ vs. $8 \%, p<0.001$ ). Nearly $83 \%$ of the men are married or cohabiting, whereas fewer women

Table 1
Sociodemographic, physical and psychological health, and social relations variables by gender (Whitehall II Study)

|  | $N$ | Men | Women | $p$-value ${ }^{\text {a }}$ |
| :---: | :---: | :---: | :---: | :---: |
| Age group | ( $\mathrm{M}=4003$; W = 1790) |  |  | $<0.001$ |
| 35-39 |  | 27.5 | 22.7 |  |
| 40-44 |  | 27.3 | 24.5 |  |
| 45-49 |  | 20.4 | 22.4 |  |
| 50-55 |  | 24.9 | 30.3 |  |
|  |  | 100.0\% | 100.0\% |  |
| Grade of employment (Phase 1) | $(\mathrm{M}=4003 ; \mathrm{W}=1790)$ |  |  |  |
| Administrative - Highest |  | 38.2 | 9.1 | $<0.001$ |
| Professional/Executive - Intermediate |  | 54.1 | 42.4 |  |
| Clerical/Support - Lowest |  | 7.7 | 47.9 |  |
|  |  | 100.0\% | 100.0\% |  |
| Marital status ${ }^{b}$ (Phase 1) Married or cohabiting (\%) | ( $\mathrm{M}=3992$; $\mathrm{W}=1780$ ) |  |  |  |
|  |  | 82.9 | 61.9 | $<0.001$ |
| Number of people feel very close to ( $\pm$ SD) at Phase 1 | $\begin{aligned} & (\mathrm{M}=3970 ; \mathrm{W}=1801) \\ & (\mathrm{M}=4003 ; \mathrm{W}=1790) \end{aligned}$ | $5.85( \pm 5.2)$ | 6.12 ( $\pm 4.7)$ | $=0.06$ |
| Number of close persons nominated (Mean $\pm$ SD) |  | 3.49 ( $\pm 2.5)$ | 3.66 ( $\pm 1.4)$ | <0.01 |
| 1 Close person nominated |  | 9.4 | 3.5 |  |
| 2 Close persons nominated |  | 10.6 | 8.3 |  |
| 3 Close persons nominated |  | 15.5 | 12.8 |  |
| 4 Close persons nominated |  | 64.5 | 75.4 | $<0.001$ |
|  |  | 100.0\% | 100.0\% |  |
| Spouse ${ }^{b}$ nominated as closest person among married (\%) Proportion of women nominated (\%) at Phase 1 | ( $\mathrm{M}=3377$; W = 1155 ) | 92.4 | 79.6 | $<0.0001$ |
|  |  |  |  |  |
| Closest person |  | 91.6 | 30.0 | <0.0001 |
| Closest person (excl. spouse ${ }^{\text {b }}$ ) |  | 63.9 | 59.2 | <0.05 |
| Among all close persons (up to 4) |  | 59.0 | 57.4 | n.s. |
| Among all close persons (up to 4) (excl. spouse ${ }^{\text {b }}$ ) |  | 45.8 | 49.2 | <0.0001 |

Table 1 (continued)

|  | $N$ | Men | Women | $p$-value ${ }^{a}$ |
| :---: | :---: | :---: | :---: | :---: |
| Social network index ( $\pm$ SD) | ( $\mathrm{M}=4107 ; \mathrm{W}=1858$ ) | 10.09 ( $\pm 4.1)$ | $9.43( \pm 3.9)$ | <0.0001 |
| Satisfaction with personal relationships at Phase 1 | ( $\mathrm{M}=4003$ W W = 1790) |  |  |  |
| Mean score ( $\pm$ SD) (Higher score reflects greater satisfaction) |  | 5.19 ( $\pm 1.8)$ | 5.39 ( $\pm 1.8)$ | <0.0001 |
| Proportion dissatisfied (\%) |  | 25.5 | 21.3 | <0.001 |
| Proportion dissatisfied (\%) by marital status ${ }^{b}$ Married/Cohabiting | $(\mathrm{M}=3309 ; \mathrm{W}=1102)$ | 21.3 | 17.5 | <0.01 |
| Never married, separated, divorced, widowed | $(\mathrm{M}=682 ; \mathrm{W}=678)$ | 46.0 | 27.4 | $<0.001$ |
| Self reported health at Phase 2 Average or worse (\%) | ( $\mathrm{M}=3988$; $\mathrm{W}=1783$ ) | 22.0 | 36.6 | <0.001 |
| Average or worse (\%) by marital status ${ }^{6}$ |  |  |  |  |
| Married/Cohabiting | ( $\mathrm{M}=3298 ; \mathrm{W}=1097$ ) | 20.7 | 36.1 | $<0.001$ |
| Never married, separated, divorced, widowed | $(\mathrm{M}=679 ; \mathrm{W}=676)$ | 28.4 | 37.4 | <0.001 |
| Psychological health (General Health Questionnaire: GHQ at Phase 2) | $(\mathrm{M}=4003 ; \mathrm{W}=1790)$ |  |  |  |
| Total score ( $\pm$ SD) |  | 3.63 ( $\pm 5.4)$ | $4.78( \pm 6.4)$ | $<0.0001$ |
| Above threshold - GHQ $\geq 5$ (\%) |  | 27.1 | 34.2 | <0.001 |
| Above threshold (\%) by marital status ${ }^{b}$ |  |  |  |  |
| Married/Cohabiting Never married, separated, divorced, widowe | $\begin{aligned} & (\mathrm{M}=3298 ; \mathrm{W}=1097) \\ & (\mathrm{M}=679 ; \mathrm{W}=676) \end{aligned}$ | $\begin{aligned} & 26.7 \\ & 28.6 \end{aligned}$ | $\begin{aligned} & 33.7 \\ & 34.8 \end{aligned}$ | $\begin{aligned} & <0.001 \\ & <0.001 \end{aligned}$ |

a. $p$-values for test of difference, between men and women, in means or distributions.
b. Married always refers to married/cohabiting and spouse always refers to spouse/partner.
( $62 \%$ ) are married or cohabiting ( $p<0.001$ ). Women report more psychological distress and worse self-reported health, while men report more dissatisfaction with their personal relationships ( $25.5 \%$ vs. $21.3 \%$, $p<0.001$ ). The latter finding is explained in part by marital status. Men who are not married or cohabiting are more than twice as likely to be dissatisfied with their personal relationships, $46 \%$ compared to $21 \%$ of married men, whereas the effect is significantly less for women, $27 \%$ for non-married and $18 \%$ for married women.

More than $9 \%$ of the men nominated only one close person, while $64.5 \%$ nominated four. Women nominate more close persons than men do; $3.5 \%$ nominated only one close person and $75.4 \%$ nominated four. The mean number of persons nominated was 3.66 for women and 3.49 for men $(x<0.01)$. However, there were no gender differences for the "number of persons to whom one feels very close", the entry question of the Close Persons Questionnaire. Men report larger networks than women; the mean social network index is 10.09 for men and 9.43 for women ( $\beta<0.0001$ ).

Over $92 \%$ of the married/cohabiting men nominated their wife as the closest person in contrast to $80 \%$ of the married women who nominated their partners ( $p<0.0001$ ). Furthermore, $3.5 \%$ of the married/cohabiting men do not nominate their spouse/partner as any one of the four possible close persons, whereas, for women the proportion is $9 \%(p<0.0001)$. This suggests that the spouse or partner may have different support functions, or is seen as providing less closeness, for women than for men.

We then examined the gender of the closest person, as well as of all four close persons nominated. It is not surprising that for the closest person, $91.6 \%$ of men identify a woman as married men usually nominate their spouse/partner in this category (and $83 \%$ of the men are married), whereas women nominate a woman $30 \%$ of the time (Table 1). When we exclude nominations of a spouse, then among the remaining close person relationships, $64 \%$ of the men nominate a woman as their closest person compared to $59 \%$ of the women. If we consider up to four nominated close persons, we note that for the women, $57.4 \%$ of the close persons nominated are women and for men it is $59 \%$. In contrast, after excluding the spouse/partner, among up to four nominated close persons, the proportion of women nominated by the men is $45.8 \%$ compared with $49.2 \%$ women nominated by women ( $p<0.0001$ ). If the nature of the support provided by
women is different from that provided by men, women will benefit from having more close relationships with women beyond that which is provided by the spouse.

Table 2
Mean scores for types of social support for men and women adjusted for age group and grade of employment: (a) from closest person and ( $b$ and $c$ ) weighted cumulative index $=$ from up to four close persons nominated

|  | $\begin{gathered} \text { Men } \\ (n=4003) \\ \text { Mean }^{a} \end{gathered}$ | Women ( $n=1790$ ) <br> Mean | Gender comparisons. $p$ value for difference of means |
| :---: | :---: | :---: | :---: |
| Confiding/Emotional support <br> (a) Closest person | 15.36 | 15.82 | <0.01 |
| (b) Cumulative index $\mathrm{A}^{a}(1.0,0.25,0.15,0.10)$ | 18.93 | 20.61 | <0.001 |
| (c) Cumulative index $\mathrm{B}^{a}(1.0,0.60,0.45,0.30)$ | 24.86 | 28.52 | <0.0001 |
| Practical support | 5.91 | 5.25 | <0.0001 |
| (b) Cumulative index $\mathrm{A}^{b}(1.0,0.25,0.15,0.10)$ | 6.77 | 6.24 | <0.001 |
| (c) Cumulative index $\mathrm{B}^{c}(1.0,0.60,0.45,0.30)$ | 8.20 | 7.86 | <0.01 |
| Negative aspects of close relationships |  |  |  |
| (a) Closest person | 2.71 | 2.74 | n.s. |
| (b) Cumulative index $\mathrm{A}^{b}(1.0,0.25,0.15,0.10)$ | 3.47 | 3.64 | $<0.06$ |
| (c) Cumulative index $\mathrm{B}^{c}(1.0,0.60,0.45,0.30)$ | 4.71 | 5.12 | $<0.0001$ |

a. Higher score reflects better confiding/emotional and practical support, but worse negative aspects of relationships.
b. Weights used for preliminary cumulative index.
c. Weights derived from response patterns and sensitivity analyses.

Table 2 illustrates that there are gender differences for most of the types of support. Higher scores for the confiding/emotional and practical support are indicative of more, i.e. better, support, whereas for negative aspects, lower scores are more desirable. Whether the type of support is calculated based on the closest person only, or on the weighted cumulative indices, women receive and provide more confiding/emotional support than men. Men on the contrary, receive more
practical support than women. There are no significant differences in the gender patterns of negative aspects of close relationships for the closest person, but there are more pronounced gender differences in mean scores when information on all nominees are included in the assessment of social relations. This was observed with the weights that minimised the support from persons other than the first person (Cumulative Index A: $1.0,0.25,0.15,0.10)(p<0.06)$, but was highly significant ( $p<0.0001$ ) with the weights arrived at based on the sensitivity analyses (Cumulative Index B: $1.0,0.60,0.45,0.30$ ). Our subsequent analyses compare the components for the closest person and Cumulative Index B. The three subscale scores are divided into gender-specific tertiles, and so the highest tertile for confiding/emotional and practical support is the "best" tertile, whereas the lowest tertile is the "best" for the negative aspects of support component.

### 3.1. Satisfaction with personal relationships and types of support

Types of support received or exchanged are not experienced in isolation of the others; hence, we included the three types of support simultaneously in the model. We then examined how each of the types of support predicted dissatisfaction with personal relationships when adjusting for the other types, and whether we observed any gender differences by either method of measurement, i.e. first closest person or Cumulative Index B (weights $1.0,0.60,0.45,0.30$ ). Some interesting contrasts should be noted in Table 3. For men and women, dissatisfaction with personal relationships is strongly predicted by lack of confiding and emotional support, and the effect increases for both genders when the cumulative index is used. For men, the effect of practical support is not changed by the measurement method; it remains the same whether assessed from the closest or multiple nominees. This differs for women, where we observe no significant effect when the closest person is used, but an increase in dissatisfaction when the cumulative index is used. This could be interpreted as indicating that low practical support from several people, is worse than low practical support provided by the closest nominee, as if reflecting multiple sources of disappointment. Another explanation might be that the closest person is usually the spouse and the amount of practical support provided by the spouse may not influence relationship dissatisfaction for women.

Table 3
Odds ratios for dissatisfaction with personal relationships by type of support exchanged, according to measurement method of support (closest person and weighted index of up to 4 close persons) (adjusted for age, marital status, grade of employment and other close persons components ${ }^{a}$ in table)

a. Each component is adjusted for the other two in the table, i.e. confiding/emotional is adjusted for practical and negative aspects, etc.
$b$. Figures in brackets show the weight given to each of the four closest persons, starting with the closest person.

For both men and women, highly negative aspects of relationships remained strongly predictive of dissatisfaction, and for both genders, the risk was higher when assessed across all close persons nominated. Interestingly, it is not merely being in the worst tertile that is associated with dissatisfaction; with the exception for practical support, we note the presence of a gradient across the tertiles for both men and women. On the contrary, for practical support we observe a threshold effect, where being in the worst tertile increases the risk of dissatisfaction, irrespective of gender and method of measurement.

### 3.2. Health and types of support

In Tables 4 and 5 we show the effect of the three different types of support on both physical health and psychological distress, after adjusting for age, marital status and the other types of support. Negative aspects of close relationships are detrimental to both physical and psychological health; this finding is consistent across gender, is linear in nature, and increases in magnitude when the negativity comes from close others in addition to the closest person, as shown by the odds ratio for the cumulative index. The effect of social support is greater on psychological distress than on self-assessed health (Table 4).

The results for confiding/emotional support illustrate similar patterns for both men and women for self-assessed health; being in the worst tertile increased the risk of ill-health, with a somewhat stronger effect for men when the cumulative index for 4 close persons was used rather than the closest person. Gender effects were virtually equivalent when the cumulative index $(1.0,0.60,0.45,0.30)$ was used to predict psychological distress, whereas confiding/emotional support from the closest person was not a significant predictor for women though it was for men. With one exception, insufficient practical support had no effect on health in this study of middle aged adults. Being in the lowest tertile for practical support from the closest person confers protective effects for women, but this may reflect reverse causality. It may be that women who are ill receive more practical support as a response to their poor health. This differs for men, who probably receive practical support irrespective of their health status.

Table 4
Gender specific odds ratios for average or worse self-reported health at Phase 2 by Phase 1 types of support and measurement methods (adjusted for age, marital status, grade of employment and other close persons components ${ }^{a}$ in table)

|  | Men ( $n=4,003$ ) |  | Women ( $n=1,790$ ) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Closest person <br> Odds ratio (95\% C.I.) | Cumulative index B $(1.0,0.6,0.45,0.3)^{b}$ <br> Odds ratio ( $95 \%$ C.I.) | Closest person Odds ratio (95\% C.I.) | $\begin{aligned} & \text { Cumulative index B } \\ & (1.0,0.6,0.45,0.3)^{b} \end{aligned}$ <br> Odds ratio (95\% C.I.) |
| Average to poor health |  |  |  |  |
| Confiding/ emotional support |  |  |  |  |
| Best (highest) tertile (=referent) | 1.00 | 1.00 | 1.00 | 1.00 |
| Intermediate tertile | 1.10 (0.9-1.3) | 1.28 (1.1-1.6) | 1.09 (0.9-1.4) | 1.16 (0.9-1.5) |
| Worst (lowest) tertile | 1.29 (1.0-1.6) | 1.42 (1.2-1.8) | 1.26 (1.0-1.7) | 1.29 (1.0-1.7) |
| Practical support |  |  |  |  |
| Best (highest) tertile (=referent) | 1.00 | 1.00 | 1.00 | 1.00 |
| Intermediate tertile | 0.99 (0.8-1.2) | 0.86 (0.7-1.1) | 0.80 (0.6-1.0) | 0.97 (0.8-1.2) |
| Worst (lowest) tertile | 0.93 (0.7-1.2) | 0.96 (0.8-1.2) | 0.68 (0.5-0.9) | 0.87 (0.7-1.1) |
| Negative aspects of close relationships |  |  |  |  |
| Best (lowest) tertile (=referent) | 1.00 | 1.00 | 1.00 | 1.00 |
| Intermediate tertile | 1.33 (1.1-1.6) | 1.51 (1.2-1.8) | 1.32 (1.0-1.7) | 1.35 (1.1-1.7) |
| Worst (highest) tertile | 1.64 (1.4-2.0) | 2.00 (1.6-2.4) | 1.42 (1.1-1.8) | 1.80 (1.4-2.3) |

a. Each component is adjusted for the other two in the table, i.e. confiding/emotional is adjusted for practical and negative aspects, etc.
$b$. Figures in brackets show the weight given to each of the four closest persons, starting with the closest person.

Table 5
Gender specific odds ratios for psychological morbidity ( $\mathrm{GHQ}^{a} \geq 5$ ) at Phase 2 by Phase 1 types of support and measurement methods (adjusted for age, marital status, grade of employment and other close persons components ${ }^{b}$ in table)

|  | Men ( $n=4,003$ ) |  | Women ( $n=1,790$ ) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Closest person <br> Odds ratio (95\% C.I.) | Cumulative index B $(1.0,0.6,0.45,0.3)^{c}$ <br> Odds ratio (95\% C.I.) | Closest person <br> Odds ratio (95\% C.I.) | Cumulative index B $(1.0,0.6,0.45,0.3)^{c}$ <br> Odds ratio (95\% C.I.) |
| Psychological morbidity |  |  |  |  |
| Confiding/ emotional support |  |  |  |  |
| Best (highest) tertile (=referent) | 1.00 | 1.00 | 1.00 | 1.00 |
| Intermediate tertile | 1.16 (1.0-1.4) | 1.28 (1.1-1.5) | 1.05 (0.8-1.4) | 1.23 (1.0-1.6) |
| Worst (lowest) tertile | 1.36 (1.1-1.7) | 1.50 (1.2-1.8) | 1.18 (0.9-1.6) | 1.49 (1.1-2.0) |
| Practical |  |  |  |  |
| Best (highest) tertile (=referent) | 1.00 | 1.00 | 1.00 | 1.00 |
| Intermediate tertile | 0.89 (0.7-1.1) | 1.06 (0.9-1.3) | 0.89 (0.7-1.2) | 1.08 (0.8-1.4) |
| Worst (lowest) tertile | 0.99 (0.8-1.2) | 1.01 (0.8-1.2) | 0.87 (0.7-1.2) | 0.94 (0.7-1.2) |
| Negative aspects of close relationships |  |  |  |  |
| Best (lowest) tertile (=referent) | 1.00 | 1.00 | 1.00 | 1.00 |
| Intermediate tertile | 1.46 (1.2-1.7) | 1.61 (1.3-1.9) | 1.60 (1.3-2.1) | 1.69 (1.3-2.2) |
| Worst (highest) tertile | 2.06 (1.7-2.4) | 2.64 (2.2-3.2) | 2.40 (1.8-3.0) | 2.84 (2.2-3.7) |

a. $\mathrm{GHQ}=$ General Health Questionnaire.
b. Each component is adjusted for the other two in the table, i.e. confiding/emotional is adjusted for practical and negative aspects, etc.
c. Figures in brackets show the weight given to each of the four closest persons, starting with the closest person.

## 4. Discussion

This re-analysis of Whitehall II data has illustrated that "genderfair" measures of social relations can be developed when informed by social theory and empirical evidence. When the measurement approach incorporates gender-related patterns of social functioning and behaviour, we obtain equivalent effects on health for men and women. This is in contrast to the weaker or non-significant effects often found for women and also reported in the present paper when assessment of women's support is limited to the closest person. We do not, however, recommend different approaches for measuring social support for men and women; we do propose the use of gender sensitive approaches so that gender biased underestimates are not due to measurement.

The present findings are in agreement with other studies that describe patterns of social relations which led to this re-analysis. Women nominate and report having more close persons, report greater satisfaction with their personal relationships, irrespective of their marital status, yet we note with interest that men report larger social networks as measured by our adaptation of the social network index. The differences are not large, but they are statistically significant, and may reflect the patterns of male socialisation, i.e. moving in groups, in contrast to women who tend to have more confidant(e)s.

Men report higher levels of practical support from the person they identify as closest, while women report higher levels than men from the subsequent close persons, which is likely to reflect the fact that men receive more from the closest person who is most often a woman and more often their spouse. This is in keeping with a greater benefit of marriage to men than to women found in other studies (Gore and Mangione, 1983; Hughes and Gove, 1981; Pearlin and Johnson, 1977; Wyke and Ford, 1992). In this age-cohort, women may indeed receive less practical support from their partners, a result that needs to be reexamined in younger cohorts in order to determine whether it is period or cohort specific, or indeed gender specific. There is a need to be cautious in interpreting the results related to practical support. Our findings for women, where lower levels of practical support are associated with better health, endorse the hypothesis that practical support received may, in fact, reflect a response from close persons to existing illhealth or disability.

The finding that demonstrates that the greater the number of close persons nominated, the higher the confiding/emotional support reported from each close person could be interpreted in several ways. This did not support the hypothesis that reliance on a smaller number of close persons might substitute in "quality" what was lost in "quantity". One could speculate that individuals who have the ability to make and sustain more social relationships, derive and exchange more support from each of those relationships, thereby enjoying overall better support.

Our results suggest that information about several close persons offers a more accurate portrayal of support exchanged than relying solely on information about the closest person. This may be due in part to greater measurement precision when several sources of information are used, but it could also be due to a better representation of sources of support. Better coverage of sources of support received may yield more accurate results in analyses of social relations and health. Therefore, use of questionnaires, such as the Close Person Questionnaire, which asks about several close persons, captures the varying sources of support by gender, and will lead to better specification of the association between social relations and health.

The weights that we are recommending, of course, remain open to debate and refinement. Moreover, the number of close persons to consider needs further evaluation, as the time to complete the questionnaire increases proportionally with each additional person included. It is not clear how generalisable these results are to other age groups, non-working populations and different cultural groups. Nevertheless, the overall pattern of gender differences in support is similar to other studies (Antonucci, 1994; Belle, 1989). Further investigation of how specific these patterns are to this lifestage, whether they vary if the participants have children, and whether the role of social support at work modifies the patterns, would be informative and might inform how general these gender differences are.

The pattern of important social relations differs between men and women. It is indispensable that instruments measuring social relations must be "gender-fair", that is to say, they need to take account of the gender-specific patterns of relations. Support may be perceived, conceived or reported differently by men and women. Satisfaction with relationships may be an indicator of different needs or of the importance placed on different aspects of support for men and women, or
satisfaction may be on the pathway between types of support and health. Understanding, and then successfully measuring, social relations in both men and women, will lead to more accurate and valid studies of the effect of social relations on health. With accurate, valid, but yet, identical "gender-fair" measures, we can expect fewer spurious gender differences or associations between social relations and morbidity and mortality.

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## Appendix A. Questions from close persons questionnaire

## Introduction

This section concerns people in your life who you feel close to and from whom you can obtain support (either emotional or practical) including close relatives and good friends. Write in the people you are closest to.

Closest:
Second person:
Third person:
Fourth person:
If you are married now and have not put your husband/wife in already, then please include him/her in the Fifth person line:

Rate each person on the scale from 1 to 4 to show how well they have provided each stated type of support: $1=$ not at all, $2=$ a little, $3=$ quite a lot, $4=$ a great deal.

Questions are presented by Type of Support (all items start with "How much in the last 12 months..."). Letter preceding question indicates order of presentation in questionnaire.

## Confiding/emotional support

a) "...give you information, suggestions and guidance that you found helpful?"
c) "...make you feel good about yourself?"
d) "...share interests, hobbies and fun with this person?"
f) "...did you want to confide in (talk frankly, share feelings with this person)?"
g) "...did you confide in this person?"
h) "... trust this person with your most personal worries and problems?"
k) "... did he/she talk about his/her personal problems with you ?";

## Practical support

1) "...did you need practical help from this person with major things ...?"
$\mathrm{m})$ "... did the person give you practical help with major things ?"
o) "...did this person give you practical help with small things when you needed it ...?"

## Negative aspects of close relationships

e) "...did this person give you worries, problems and stress?"
i) "...would you have liked to have confided more in this person?"
j) "...did talking to this person make things worse?"
n) "...would you have liked more practical help with major things from this person?"

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# OFFRE DE SOINS, RECOURS AUX SOINS ET SANTE DES FEMMES EN TUNISIE 

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#### Abstract

Résumé En Tunisie, l'offre de soins de santé s'est considérablement enrichie ces 40 dernières années ; mais l'intérèt accordé à la santé des femmes est souvent limité aux risques liés à la procréation. Une meilleure prise en charge des femmes au moment des grossesses a permis des progrès sanitaires importants. L'espérance de vie à la naissance féminine est passée de 51,6 ans en 1966 à 70,2 en 1990. Dans le même temps, la mortalité infantile et la mortalité maternelle ont baissé.

Toutefois, toutes les femmes n'ont pas accès aux mêmes services de santé. Des disparités économiques et géographiques persistent jusqu'à aujourd'bui. Il serait néanmoins erroné d'affirmer que l'accès aux soins ne dépend que de l'offre. La demande de services sanitaires est, elle aussi, très variable, selon de nombreux facteurs socio-économiques. Il n'y a pas de relation parfaite entre l'offre et la demande : dans des régions bien équipées en structures et en personnel, des barrières sociales et culturelles restreignent l'accies aux soins pour les femmes. La demande de soins émanant des femmes peut varier indépendamment des soins proposés. La santé des femmes s'inscrit aussi dans des priorités sociales et familiales que l'on peut observer à un niveau micro-social et micro-local.


Mots-clés : Tunisie, Santé, Femmes, Milieu rural, Analyse micro-locale.


#### Abstract

Tunisia's health care provision has expanded considerably over the last 40 years; but the focus on women's bealth often stops short at the risks connected with reproduction. Better antenatal care bas led to significant improvements in women's bealth. Female life expectancy at birth rose from 51.6 in 1966 to 70.2 in 1990, while both infant and maternal mortality fell over the same period.

Not all women have access to the same level of health services, however. Economic and geographical disparities persist even today. But it would be wrong to claim that access to care is purely supply-driven. Demand for health services also varies widely with a range of socioeconomic factors. There is no perfect relationship between supply and demand: in regions with sufficient, well-staffed provision, social and cultural barriers restrict women's access to care. Women's care demand may vary independently of care provision. Women's health is also an observable social and family priority at the micro-social and micro-local levels.


Keywords: Tunisia, Health, Women, Rural areas, Micro-local analysis.

## 1. Introduction

L'Organisation Mondiale de la Santé, dans sa Constitution, en 1946, donne comme définition de la santé «un état de complet bienêtre physique, mental et social, et non seulement l'absence de maladie et d'infirmité». Elle donne un cadre transculturel et abistorique de la santé publique (cf. Fassin, 1997). Dès lors, de nombreux travaux rendent compte de l'évolution de l'état de santé de la population mondiale ou de certaines populations nationales à l'aide d'indicateurs «standards» qui annihilent souvent des inégalités qui peuvent être très importantes : inégalités sociales, régionales et inégalités de genre. D'un point de vue méthodologique, les indicateurs classiques permettent de mesurer certaines inégalités en matière de santé, il suffit par exemple de les collecter par sexe. Ces mesures ne sont pas toujours disponibles et la santé des femmes n'a souvent été approchée qu'en fonction de leur rôle procréateur ${ }^{1}$.

[^33]Dans une large majorité de pays, en raison de l'absence de données fiables, il est difficile de se prononcer de manière définitive sur l'accès des femmes aux services médicaux et sur leur état de santé. En Tunisie, les indicateurs empiriques habituellement utilisés pour caractériser la santé d'une population existent et, pour la plupart, ils ont été recueillis par sexe, ainsi les espérances de vie masculine et féminine et la mortalité infantile des garçons et des filles sont connues au moins depuis le début des années 1960. C'est à travers l'exemple de la Tunisie, à partir de données nationales, régionales, mais aussi micro-locales, que nous voudrions montrer ici que, s'il est nécessaire de faire un bilan global de la santé des femmes, on ne peut se dispenser d'une analyse plus fine pour comprendre les contraintes qui pèsent sur l'offre et sur la demande en soins médicaux. Ces contraintes sont d'origines multiples : économiques, géographiques, mais aussi sociales et culturelles.

### 1.1. La définition de la santé et l’offre de soins en Tunisie

En 1956, au moment de l'indépendance, la couverture sanitaire en Tunisie est faible. Le premier plan de développement (1962-1964) tente de remédier à cette situation. L'amélioration de la santé est alors considérée par les planificateurs comme un moyen de combattre le sousdéveloppement. Une grande partie des investissements est réservée aux structures destinées aux femmes et aux enfants (parmi les 7600 lits d'hôpitaux créés, 2000 sont des lits de maternité) (Bakay, 1990). Jusqu'au milieu des années 1970, le nombre de structures (relativement à la population) augmente rapidement (graphique 1). Dans les trois premiers plans de développement (1962-1972), la notion de santé est très large et une attention particulière est portée aux conditions de vie de la population susceptibles de nuire à sa santé (lutte contre la malnutrition, programmes d'amélioration des logements...). Dès le IV ${ }^{\mathrm{e}}$ plan (1973-

[^34]1976), une nouvelle politique de santé est engagée, l'accent est mis sur la formation du personnel médical ; le nombre de médecins et de sa-ges-femmes augmente rapidement (tableau 1). Malgré cette incontestable amélioration, le déficit en spécialistes reste important, et ce jusqu'à aujourd'hui (CREDIF, 1994, p. 97).

Tableau 1
Quelques indicateurs de l'évolution du personnel médical en Tunisie

|  | Sages-femmes <br> pour 10 000 femmes <br> de 15-49 ans | Médecins <br> pour 10 000 <br> habitants | Pharmaciens <br> pour 10000 <br> habitants | Nombre <br> de <br> gynécologues |
| :---: | :---: | :---: | :---: | :---: |
| 1966 | 1,12 | 1,5 | 0,33 |  |
| 1976 | 1,63 | 2,0 | 0,80 | 70 |
| 1986 | 6,60 | 4,4 | 1,64 | 115 |
| 1998 | 8,00 | 6,7 | 2,30 | 365 |

Source: ONFP, 1998.

Graphique 1
Quelques indicateurs de l'évolution des structures médicales
en Tunisie


Sources : INS, dans : CREDIF, 1994 ; Ministère de la Santé Publique, 1996.

Dans le $\mathrm{VI}^{\text {c }}$ plan de développement économique et social (19821986), pour le secteur de la santé, l'élément majeur «est constitué par l'insertion rationnelle dans notre système de Santé Publique, notamment en zones rurales, des services de Soins de Santé de Base», permettant d'accroître rapidement la couverture sanitaire, surtout parmi les populations les plus défavorisées. La croissance rapide des dispensaires ruraux, l'instauration d'un système de sécurité sociale et de retraite, la gratuité des soins pour les plus pauvres ont contribué à une meilleure couverture sanitaire.

Dans les plans de développement suivants, le secteur privé est très sollicité. Les cliniques sont certes en nombre croissant (en 1995, il en existait 49, 46 étaient en projet de construction), mais elles sont concentrées dans les grandes villes. Des 49 cliniques fonctionnant en 1995, 26 sont à Tunis et la moitié des gouvernorats en sont totalement dépourvus (Ministère de la Santé Publique, 1996).

La définition de la santé et les populations cibles des actions publiques ont évolué au fil des plans de développement économique ; tous les indicateurs exposés ici montrent que le volume d'offre de structures de santé et de personnel médical a régulièrement augmenté. Les femmes dans leur ensemble ont eu un accès croissant à la médecine «moderne». Dans ce contexte, comment a évolué l'état de santé des femmes?

### 1.2. Une constante amélioration de l'état de santé des femmes en Tunisie

L'état de santé des femmes est un domaine vaste et il difficile d'en donner une vision totale. Les informations dont nous disposons sont en général très partielles et ne couvrent que quelques domaines de la santé féminine. En Tunisie, la santé des petites filles et des femmes peut être approchée à travers la mortalité infantile, la mortalité maternelle et l'espérance de vie.

### 1.2.1. La mortalité infantile

Le taux de mortalité infantile est un bon indicateur de l'état sanitaire d'une population. C'est aussi souvent un «révélateur» du statut des femmes et du traitement (alimentation, soins...) différent donné aux petites filles et aux petits garçons. En Tunisie, aussi loin que les
statistiques permettent d'observer le phénomène, la mortalité infantile féminine a toujours été inférieure ou égale à celle des garçons.

La mortalité infantile féminine - et masculine - diminue rapidement depuis le début des années 1970 (graphique 2). Cette évolution est le résultat de l'amélioration des conditions de vie en Tunisie et de changements démographiques importants (baisse de la fécondité, diminution du nombre de grossesses précoces et tardives...) mais aussi de campagnes massives de vaccination entreprises dès le début des années 1980. Il est intéressant de noter que ces changements de conditions de vie et de comportements démographiques ont profité autant aux garçons qu'aux filles. L'enquête tunisienne sur la santé de la mère et de l'enfant (ETSME) montre qu'en 1995, le pourcentage d'enfants de moins de 5 ans jamais vaccinés est faible pour les deux sexes ( $1,8 \%$ pour les garçons, $1,4 \%$ pour les filles). Elle montre aussi que le mode de prise en charge de la maladie (diarrhée, fièvre, toux...) varie peu selon le sexe de l'enfant (ONFP, 1996).

Graphique 2
Taux de mortalité infantile féminine (pour 1000 naissances vivantes)
en Tunisie


Sources : Zouari, 1990 ; INS, 1996.

### 1.2.2. La mortalité maternelle

La mortalité maternelle est difficile à saisir et à mesurer. Même dans les pays développés, elle est souvent sous-estimée. Dans les pays
où la couverture sanitaire est défaillante, on a peu ou pas de données fiables sur la mortalité ou la morbidité féminine.

En dépit de l'insuffisance des statistiques de causes de décès en Tunisie, plusieurs travaux ont tenté d'estimer la mortalité maternelle (Zouari, 1990, p. 103 ; CREDIF, 1994, p. 108). Les plus crédibles donnent un taux de mortalité maternelle d'environ 140 décès pour 100000 naissances vivantes en 1966 et autour de 60 en 1992. La médicalisation des grossesses et des accouchements augmentant, cet indicateur devrait être de plus en plus précis ${ }^{2}$.

### 1.2.3. L'espérance de vie

Le recul de la mortalité et plus généralement l'amélioration des conditions socio-économiques ont permis d'augmenter l'espérance de vie à la naissance de la population tunisienne (tableau 2). Cette évolution a davantage profité aux femmes. Alors qu'il n'était que d'une année en 1966, l'écart entre les espérances de vie féminine et masculine est supérieur à 4 années en 1994.

Tableau 2
Espérance de vie à la naissance par sexe en Tunisie (en années)

| Sexe | 1966 | 1975 | 1984 | 1994 |
| :--- | :--- | :--- | :--- | :--- |
| Masculin | 50,6 | 57,8 | 66,1 | 69,3 |
| Féminin | 51,6 | 59,3 | 68,2 | 73,0 |
| Ensemble | 51,1 | 58,6 | 67,1 | 71,2 |

Source : INS, 1994, p. 13

Malgré un déficit de données précises, notamment sur l'incidence des maladies graves qui touchent les femmes (cancer de l'utérus, du sein...) (CREDIF, 1994), les taux de mortalité et l'espérance de vie permettent de conclure à une amélioration de l'état de santé de la population féminine depuis 40 ans. Cette tendance s'explique à la fois par des comportements et des conditions de vie moins risqués pour leur

[^35]santé (moins de grossesses à risque, meilleure alimentation...) et par un recours plus important aux soins. Au niveau national, il est assez facile de faire le lien entre la santé des femmes et leur accès aux structures médicales.

Ces évolutions nationales ne doivent pas faire oublier que des inégalités très fortes subsistent, inégalités sociales, économiques, mais aussi régionales.

### 1.3. Des disparités régionales fortes

La situation sanitaire qui se caractérise par l'offre de soins médicaux (structures et personnel qualifié), le recours aux soins et l'état de santé de la population varient de façon remarquable d'une région à l'autre en Tunisie, en 1995. À titre d'exemple, le taux de mortalité infantile féminin est deux fois plus élevé dans le gouvernorat de Siliana $(40,4 \% \text { ) que dans celui de Tunis ( } 19,0 \%)^{3}$. De même, l'écart régional d'espérance de vie à la naissance des femmes est de plus de 6 ans : elle atteint 76,6 ans dans le gouvernorat de Gabès et 70,5 ans à Siliana. Les structures sanitaires ne sont pas non plus également réparties sur le territoire : dans la région de Kairouan, on compte plus de 4700 habitants pour un médecin, contre seulement à peine 1700 à Sousse. De la même façon, le nombre de jours d'hospitalisation par habitant, indicateur du recours aux soins, varie de 0,15 dans le gouvernorat de Zaghouan à 0,66 à Sousse.

On pourrait s'attendre alors à observer une dichotomie : des régions avec peu de structures, peu de recours aux soins et des femmes en mauvaise santé s'opposant à des régions avec une offre de soins et un recours aux soins importants, et de bons indicateurs de santé. La réalité apparaît plus complexe.

Certes, sur l'ensemble des gouvernorats, le nombre de lits d'hôpitaux et la proportion d'accouchements médicalisés sont fortement corrélés. Néanmoins, il faut remarquer que certaines régions se distinguent. C'est notamment le cas de Béja et Jendouba, deux gouvernorats du NordOuest qui, malgré un faible équipement en structures hospitalières, affichent des taux d'accouchement en hôpital très élevés ; la situation inverse est observée dans certaines régions du Centre-Est (Sousse, Monastir). Autrement dit, dans ces régions, le recours aux soins n'est

[^36]pas totalement dépendant de l'offre de soins. Est-il pour autant judicieux de conclure que «les femmes ne profitent pas suffisamment des capacités sanitaires mises à leur disposition...» (CREDIF, 1994) sans plus de précisions?

Ce résultat - d'autres exemples pourraient être cités - montre que, déjà à une échelle régionale, il est imprudent de réduire le niveau de recours aux soins (donc l'état de santé des femmes) à une variable dépendante de l'offre de soins. À une micro-échelle, il semble que des facteurs individuels ou familiaux interfèrent pour expliquer le recours aux soins, indépendamment du contexte structurel ou économique. Pour le préciser, il faut focaliser l'analyse à une nouvelle échelle microlocale, micro-sociale.

## 2. Les facteurs socio-économiques du recours aux soins des femmes dans deux zones rurales tunisiennes : une perspective micro-sociale et micro-locale

### 2.1. De la définition de la santé et de la maladie à un niveau d'analyse micro-local...

Pour une analyse micro-locale, micro-sociale, les indicateurs utilisés précédemment au niveau national se révèlent moins pertinents ou tout simplement difficiles à collecter.

Expliquer le recours aux soins nécessite de s'intéresser aux contrôles sociaux, familiaux et individuels de la santé des femmes, et tout d'abord à la perception que les individus ont de la santé et de la médecine. Quand jugent-ils nécessaire de consulter un personnel médical ? Qui prend la décision?

Les femmes ayant encore en Tunisie, et surtout en zone rurale, un pouvoir de décision et surtout un pouvoir économique moindre que celui de leur père ou de leur mari, la santé se trouve envisagée dans la dimension des rapports de domination. Il faut tenir compte de l'appartenance de la femme à des groupes familiaux, sociaux, communautaires... susceptibles d'influencer ou de diriger ses décisions en matière de santé. Il faut prendre en compte aussi l'environnement médical de la femme dans son ensemble (guérisseurs, matrones traditionnelles, professionnels de la santé...).

### 2.2. Pourquoi avoir recours au personnel et aux services médicaux ?

Dans quelles circonstances les femmes ont-elles intérêt à être soignées ? Qui se charge de délivrer les soins ? L'offre est-elle adaptée à la demande locale en matière de santé ?

Pour tenter de répondre à ces questions dans le contexte rural tunisien, deux zones d'études ont été choisies, deux situations extrêmes géographiquement. Une de ces zones se situe dans le gouvernorat de Jendouba, dans une région nommée la Kroumirie. La seconde est une partie de la délégation d'El Faouar (gouvernorat de Kebili), elle couvre les oasis d'El Faouar et de Sabria.

La zone de Kroumirie est particulièrement défavorisée. C'est une région montagneuse, avec un climat humide, froid l'hiver et très chaud l'été. Malgré des pistes de plus en plus nombreuses et de mieux en mieux entretenues, il est difficile de se déplacer dans la région, surtout l'hiver. Les conditions d'habitat restent précaires pour une grande majorité des habitants. Les sources de revenus sont peu nombreuses, les conditions environnementales se prêtent peu à la pratique agricole et les emplois salariés ruraux sont quasiment inexistants.

Dans les oasis d'El Faouar et de Sabria, les conditions de vie sont meilleures, le chômage est moins élevé et la pratique agricole (principalement la culture du palmier dattier) plus rémunératrice.

### 2.3. Méthodes d'enquête

Seront présentés ici les résultats d'une enquête menée en 1998 en Tunisie rurale par le Centre de Recherche, d'Études, de Documentation et d'Information sur la Femme (CREDIF-Tunis) et la mission à Tunis de l'Institut de Recherche pour le Développement (IRD). Cette enquête est de type socio-économique et démographique, elle n'a pas comme objet principal d'évaluer la santé des femmes, mais comporte néanmoins beaucoup de données intéressantes sur l'accès aux soins. Plus de 1200 ménages ont été visités, plus de 8000 individus ont donc été concernés par cette collecte. Le questionnaire comportait quatre modules : un module sur les caractéristiques socio-économiques de chaque membre du ménage et sur leurs conditions de vie, un sur l'histoire migratoire du chef de ménage, un sur les activités (domestiques, artisanales, économiques, agricoles) des femmes de plus de 10
ans, et un dernier sur l'histoire génésique des femmes non célibataires. L'enquête n'est pas de type médical, mais elle présente l'avantage de pouvoir relier quelques indicateurs de santé et de recours aux soins de la population féminine à son environnement économique et surtout familial. De plus, elle a été menée de la même façon dans quatre zones rurales, de l'extrême Nord à l'extrême Sud de la Tunisie ; elle permet d'avoir une approche comparative de zones rurales géographiquement, socialement et culturellement éloignées. Des travaux complémentaires qualitatifs ont été menés sur les mêmes populations; quelques résultats en sont présentés ici.

### 2.4. L'offre de soins et le recours aux soins des femmes en Kroumirie et à E1 Faouar

En Kroumirie, les ménages sont situés en moyenne à $3,7 \mathrm{~km}$ du centre de santé de base, $36 \%$ sont à 5 km ou plus. L'hôpital le plus proche est souvent à plusieurs heures de piste.

À El Faouar, la situation est plus favorable. Il y a plusieurs centres de santé de base à proximité et surtout un hôpital dans l'oasis même d'El Faouar. L'offre de soins est donc relativement « abondante».

Des observations empiriques et les résultats de l'enquête convergent vers le même constat: le recours des femmes à la médecine «moderne» est beaucoup important en Kroumirie qu’à El Faouar (tableau 3).

Tableau 3
Quelques indicateurs de la médicalisation de la dernière grossesse et du dernier accouchement des femmes ayant eu au moins un enfant entre le $1^{\text {er }}$ janvier 1993 et la date de l'enquête

| \% de femmes ayant eu au moins un enfant <br> entre le 1er janvier 1993 et la date de l'enquête : | Kroumirie | El Faouar |
| :--- | :---: | :---: |
| - qui ont accouché à l'hôpital | 77,4 | 42,4 |
| - qui ont accouché seules ou avec une matrone <br> traditionnelle | 21,6 | 56,8 |
| - qui n'ont pas consulté de personnel médical <br> pendant leur grossesse | 12,0 | 26,0 |

Source : Enquête CREDIF-ORSTOM, 1998.

Le recours à la médecine traditionnelle (dans le cas de l'accouchement, à la matrone, la qabla) reste fréquent dans le Sud, mais est quasiment absent dans le Nord, où les qablas ont d'ailleurs presque disparu.

Les indicateurs recueillis ne concernent que la santé reproductive, mais ils sont de bons informateurs du recours des femmes à la médecine en général.

Ils concordent d'ailleurs avec la seule donnée recueillie pendant l'enquête sur l'état de santé de la population, à savoir la mortalité infantile. Sur la période 1990-1996, le taux de mortalité infantile est nettement plus faible en Kroumirie ( $26,7 \%$ ) qu'à El Faouar ( $55,8 \%$ ) .

Ces observations suscitent de nouvelles interrogations, et notamment:

- pourquoi les femmes en Kroumirie font-elles appel si massivement à la médecine malgré l'éloignement et la difficulté d'accès aux structures sanitaires, et plus généralement malgré des modes de vie que l'on peut qualifier de «traditionnels » ?
- et à l'extrême, pourquoi à El Faouar, malgré la proximité de l'hôpital, les femmes sont-elles si peu nombreuses à consulter un personnel médical qualifié ?


### 2.5. La Kroumirie

Comment des populations pauvres, «traditionnelles» dans leurs modes de vie, se sont-elles tournées vers la médecine savante, jusqu’à abandonner les médecines et les médecins traditionnels ?

### 2.5.1. De la qabla à la sage-femme et aux médecins...

Le recours à la médecine moderne en Kroumirie est relativement important compte tenu du contexte de pauvreté et de la faible infrastructure sanitaire. Le recours des femmes au personnel médical qualifié s'inscrit dans des stratégies socio-démographiques plus larges des ménages qui consistent à miser sur la qualité des enfants. C'est une région où, malgré la pauvreté, la fécondité est faible et où les taux de scolarisation au primaire sont relativement élevés - dans la zone d'enquête présentée précédemment, l'indice synthétique de fécondité est de 2,7 en 1997 et plus de $80 \%$ des 6-14 ans sont scolarisés en 1998-1999.

Au fil de la transition démographique, les parents, ayant de moins en moins d'enfants, leur ont accordé une attention toute particulière,
attention à la santé et à la formation scolaire. À une stratégie de quantité d'enfants s'est substituée une stratégie de qualité des enfants. C'est à ce titre que les femmes ont été massivement intégrées au système de santé. Dans une première étape, elles ont fait l'objet de prévention et de soins médicaux, non pas pour elles-mêmes directement, mais pour préserver la santé de leurs enfants.

Les femmes ont conscience que la médecine moderne peut leur être utile. Si on les interroge, les femmes jeunes disent qu'il est important de faire suivre sa santé, surtout pendant la grossesse :
«pour protéger le bébé et la mère, aucune femme n'arrive à accoucher toute seule, c'est très dangereux » (Zahia, juin 1999) ;
«la femme enceinte ne connaît rien et, quand elle est malade, elle risque d'avoir un danger, les médecins disent alors qu'ils ne sont pas les responsables puisque sa grossesse n'est pas suivie par un médecin» (Reguia, juin 1999).
Parce qu'elles ont longtemps été la cible privilégiée des services de planification familiale, les mères ont un accès à la médecine beaucoup plus facile que les hommes. Leur surveillance médicale est souvent meilleure que celle de leur mari. Le fait qu’elles aient été encouragées par les services de santé publique dans le cadre des programmes de planification familiale et que leur santé soit une priorité familiale a largement facilité leur intégration dans le système de soins modernes. Elles n'ont plus aucune réticence à consulter un médecin, une infirmière ou une sage-femme.

### 2.5.2. Transfert des connaissances et du pouvoir médical

Traditionnellement, le rôle de la belle-mère (garante du savoir traditionnel) était important. Aujourd'hui, dans la zone d'enquête de Kroumirie, la quasi-totalité des ménages est mononucléaire, les femmes échappent ainsi à l'autorité de leur belle-mère, donc à ses «conseils médicaux». La transmission des connaissances a été rompue, les femmes se sont d'autant plus facilement tournées vers la médecine moderne. De plus, en Kroumirie, les qablas, qui étaient les «spécialistes traditionnelles de la santé des femmes», ont presque disparu et ont été remplacées par les infirmières et les sages-femmes. Dans cette zone d'enquête, les qablas ont joué un rôle essentiel, transitoire, dans l'intégration des femmes au système de santé moderne. En effet, au milieu
des années 1980, un programme local a tenté de recycler les matrones pour les professionnaliser. Ce programme se justifiait ainsi :
«tant que l'infrastructure routière et hospitalière ne sera pas suffisante pour permettre (aux) femmes d'accoucher à l'hôpital dans de bonnes conditions, il nous semble préférable de travailler avec les matrones. Il nous semble préférable de confier les parturientes à ces femmes supervisées, voire recyclées, plutôt que les mères accouchent seules. [...] Les matrones sont des femmes mariées ou veuves ayant un nombre d'enfants limité (4 au maximum). Elles sont au courant des possibilités de limitation des naissances et de prévention (vaccination, asepsie).» (Dufriche et al., 1986).

Actuellement, les jeunes femmes n'envisagent même pas qu'une femme puisse avoir des réticences à consulter le personnel médical. Elles font confiance aux médecins et sont capables de faire la différence entre les différentes spécialités : «je soigne mes enfants chez un spécialiste d’enfants», «la grossesse doit être suivie par un médecin» souvent préféré à la sage-femme (Aziza, mai 1999).

Les femmes n'hésitent pas à se déplacer si les soins ne peuvent pas être obtenus sur place. Quand on leur demande quelles difficultés elles rencontrent pour se soigner, elles évoquent le plus souvent le manque et le coût prohibitif des médicaments. Les soins de base sont assurés, mais elles regrettent que l'hôpital soit si loin. La difficulté d'accéder aux soins apparaît surtout quand leur état de santé nécessite la visite chez un spécialiste ou une hospitalisation.

### 2.5.3. «L'important, c'est tu gardes la santé et tu t'occupes du bébé »

Comme nous l'avons déjà évoqué, les femmes mettent l'accent sur la nécessité d'être elles-mêmes en bonne santé pour pouvoir avoir de «beaux enfants, bien portants » et pour pouvoir les élever correctement. Cette approche de la santé pose un problème: les femmes qui ont fini leur vie génésique (stérilisées, ménopausées, ou qui ne souhaitent plus d'enfants) se préoccupent peu de leur santé et par conséquent font peu appel au système de soins moderne.

### 2.6. E1 Faouar

La situation observée à El Faouar est très différente de celle qui vient d'être décrite en Kroumirie. Malgré une couverture sanitaire et un
niveau de vie bien meilleurs, les femmes consultent peu les personnels de santé et fréquentent peu les structures sanitaires à leur disposition.

La médecine moderne est mal perçue par les femmes d'El Faouar. Les pratiques médicales traditionnelles sont encore vivaces. La maternité, plus que n'importe quel autre moment de la vie des femmes, fait l'objet de beaucoup de rites et de croyances qui entravent le travail des médecins. Ainsi,
«mis à part les plus proches parents, la femme (enceinte) ne révélera son secret qu’à ses meilleurs amis. Les étrangers ne remarqueront la chose qu'à la modification de son aspect. » (Clauss, 1996).
Il est difficile dans ces conditions de promouvoir les consultations prénatales. De plus, les femmes ne se déplacent pas facilement vers les hôpitaux ; pendant les trois premiers mois,
«on veillera à ce qu'(elle) ne soit pas effrayée à la vue de personnes handicapées [...] de peur que les malformations observées ne soient transmises à l'enfant. » (Clauss, 1996).
Cette croyance contraint les femmes à rester chez elles. Les matrones traditionnelles sont encore nombreuses et véhiculent beaucoup de «rites magiques» pour éviter le mauvais œeil et protéger la santé des femmes et des enfants. La maternité, comme plus largement la santé féminine, restent encore une affaire de médecine traditionnelle dont la praticienne est connue de la famille qui la mandate pour s'occuper de la santé des femmes.

À El Faouar, comme dans l'ensemble des régions du Sud tunisien, la belle-mère tient encore un rôle important dans l'entourage des femmes. Plus précisément dans la zone enquêtée, plus de $20 \%$ des ménages sont complexes, et même lorsque les épouses ne vivent pas sous le toit de leurs beaux-parents, elles n'en sont jamais très éloignées. La belle-mère perpétue les traditions et limite la mobilité et l'autonomie de ses belles-filles. Par conséquent, celles-ci manquent de formation et d'information, la médecine moderne qu'elles ne maîtrisent pas leur fait peur. De plus, dans la société oasienne, telle qu'on l'observe à El Faouar, le statut des femmes est fortement dévalorisé, celles-ci sont souvent confinées à l'espace domestique. Dans ces conditions, il leur est difficile de se rendre à l'hôpital ou même au centre de santé.

Le système social qui prédomine dans cette région du sud favorise peu l'autonomie des femmes face à leur santé ou à leur fécondité. Les femmes s'en remettent souvent au «Mektoub» (la volonté de Dieu). Ce
sont des régions où les taux de prévalence contraceptive et les taux d'avortement sont faibles et traduisent en effet le fait que les femmes ne souhaitent pas, ne peuvent pas intervenir sur leur corps. Limiter sa descendance peut même apparaître comme «indécent» au vu des recommandations familiales, ou supposées religieuses - pourtant, la planification familiale est bien tolérée par les autorités religieuses en Tunisie.

Un autre facteur entravant l'accès des femmes aux services de santé mérite d'être cité : c'est la nature de l'offre des services. Une femme d'El Faouar est d'autant plus réticente à consulter un médecin que ce-lui-ci est un homme et est d'origine régionale ou tribale différente de la sienne..., même si c'est un excellent médecin. L'offre est souvent à ce titre inadaptée à l'attente des patientes. Le personnel de santé vient majoritairement de Tunis ou d'autres grandes villes. Les prestataires de services de santé ont longtemps ignoré ces obstacles culturels et sociaux et ont imposé des programmes de santé de la même façon au Nord du pays qu'au Sud, alors que le statut des femmes, les attentes sociales en matière de santé, les caractéristiques démographiques et culturelles des populations y sont très diverses. La manière dont les habitants s'investissent dans la santé n'est pas la même dans toutes les régions ou dans tous les groupes sociaux, comme vient de le montrer la comparaison entre deux zones rurales tunisiennes.

## 3. Conclusion

En Tunisie, l'offre de soins de santé s'est considérablement enrichie ces 40 dernières années et, dans le même temps, la santé des femmes s'est améliorée.

Toutefois, toutes les femmes n'ont pas accès aux mêmes services de santé. Une analyse régionale a montré que des disparités économiques et géographiques persistent jusqu'à aujourd'hui. Il serait néanmoins erroné d'affirmer que l'accès aux soins ne dépend que de l'offre. La demande de services sanitaires n'est pas non plus uniforme et varie selon de nombreux facteurs socio-économiques. Il n'y a pas de relation parfaite entre l'offre et la demande : dans des régions bien équipées en structures et en personnel, des barrières sociales et culturelles restreignent l'accès aux soins pour les femmes. À travers l'exemple de deux zones rurales, nous avons vu comment la demande de soins émanant
des femmes peut varier indépendamment de la quantité des services sanitaires proposés. Autant en Kroumirie il est légitime pour une femme de se faire soigner, autant les obstacles sociaux et culturels à contourner sont nombreux pour les femmes à El Faouar. Il y a donc beaucoup à apprendre de la façon dont les groupes sociaux ou culturels gèrent leur santé si on adopte une méthode d'analyse qui permet de replacer la santé dans les priorités à la fois individuelles, familiales et collectives.

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Découpage administratif de la Tunisie en gouvernorats au recensement de 1994

# PLACE AND PERSONAL CIRCUMSTANCES IN A MULTILEVEL ACCOUNT OF WOMEN'S LONG-TERM ILLNESS* 

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#### Abstract

This paper investigates geographical variations in women's reports of limiting long-term illness in terms of individual inequalities and the contribution of area characteristics among wards and county districts. We use multilevel modelling of linked census data from the Office for National Statistics Longitudinal Study for England and Wales. We follow a random sample of 76,374 women aged between 16 and 45 at the time of the 1971 Census for 20 years to observe their reported limiting long-term illness (LLTI) at the 1991 Census. Car and home ownership were useful markers of social and material advantage, apparently protecting against the risk of reporting LLTI. Migration into the South-East region appeared beneficial, but otherwise there was little difference between those who moved home and those who did not. Differences between county districts persist after adjustment for individual circumstances (education and etbricity), but almost all of these differences are explained by the social profile of wards in these areas. Geographical differences


[^37]in LLTI are not, therefore, entirely explained by the distribution of individual characteristics; a woman with the same bistory may face a different risk of illness in different kinds of area. For women, the social composition of the locality (using the ward as a proxy) is more relevant than the broader economic and industrial classification of the surrounding county district, which is more important for bealth inequalities among men.

Keywords: Women's health, Geographical differences, Limiting long-term illness, Multilevel modelling, ONS Longitudinal Study.

## Résumé

Les auteurs examinent les variations géographiques des déclarations de maladies invalidantes de longue durée (MILD) chez les femmes, en termes d'inégalités au niveau individuel et de caractéristiques locales au niveau des localités et des districts. Ils appliquent un modèle multi-niveaux aux données censitaires appariées de l'Étude longitudinale menée en Angleterre et au pays de Galles par l'Office for National Statistics. On a suivi pendant 20 ans un échantillon aléatoire de 76374 femmes âgées de 16 à 45 ans au moment du recensement de 1971, afin d'observer leurs déclarations de MILD au recensement de 1991. Etre propriétaire de son logement et posséder une voiture sont de bons indicateurs d'une situation sociale et matérielle confortable, qui semble protéger contre le risque de déclarer une MILD. Migrer vers le sud-est du pays paraît être un élément favorable, mais, à part cela, il $y$ a peu de différence entre migrants et sédentaires. Les différences entre districts subsistent une fois que l'on a contrôlé les caractéristiques individuelles (niveau d'instruction et origine ethnique), mais elles sont presque toutes expliquées par le profil social des localités dans ces diverses zones. Les différences géographiques de déclaration des MILD ne sont donc pas entièrement imputables à la répartition des caractéristiques individuelles ; à partir de la même bistoire personnelle, une femme peut faire face à des risques de maladie différents dans des zones géographiques différentes. Pour les femmes, la configuration sociale de la localité est plus déterminante que les grandes caractéristiques économiques et industrielles du district qui l'environne, tandis que le district joue un rôle plus important dans l'explication des différences de santé chez. les hommes.

Mots-clés: Santé des femmes, Différences spatiales, Maladie invalidante de longue durée, Modèles multi-niveaux, Etude longitudinale de l'ONS.

## 1. Introduction

Existing research on the social patterning of women's health draws attention to the significance of social roles and socioeconomic position (Arber, 1997; Macintyre and Hunt, 1997). This paper approaches the less well explored question of geographical variations in women's health. It asks what role may be played by geographical variations beyond differing social composition and economic structure. It draws on recent conceptual frameworks, which emphasise the role of area in understanding health inequalities (Arber, 2000; Curtis and ReesJones, 1998; Macintyre et al., 1993; Moss, this volume). We explore women's health inequalities in England and Wales at two levels of geographical aggregation.

In the examination of area based inequalities in health, it is conventional to distinguish between 'contextual' and 'compositional' factors (Reijneveld and Schene, 1998). Area composition comprises those characteristics, which are the product of the aggregation of individual residents. A good example is the 'deprivation score', derived from the numbers of individuals in an area who are in a disadvantaged social class, unemployed, without cars, living in council accommodation and so on. Area context can be seen from several perspectives. In some work, context is conceptualised as an emergent property of the aggregation of individual characteristics. Although data on the individuals may guard against committing the 'ecological fallacy' (Robinson, 1950), Curtis and Rees-Jones (1998) warn against the risk of committing an 'atomistic fallacy' where the collectivity is more than the sum of its parts. 'Non-deprived' individuals have, for example, been found to have a higher risk of illness in areas where large numbers of 'deprived' persons live (Shouls et al., 1996). Sloggett and Joshi (1998b) report a similar finding for housewives but not employed women nor men.

Other studies regard context as more appropriately measured in the objective nature of the physical or economic environment. For example in terms of climate, the quality of local shops and transport, employment opportunities, the availability of open spaces, and other leisure facilities and services. There are also more subjective definitions of place, its scenery and security, as experienced by the inhabitants, and perceived in its reputation by others which may affect morale, the quality of life and health (Curtis and Rees-Jones, 1998; Gattrell et al., 2000). Curtis and Rees-Jones (1998) suggest a conceptual map to help under-
stand the relationship between area and health experience by describing a set of overlapping landscapes: ecological (e.g. industrial pollution); materialist (e.g. the quality of the housing stock); consumption (e.g. lack of public transport); and therapeutic (e.g. the degree of social cohesion). The classical policy questions which can be addressed within this conceptual framework are those concerned with the effects on quality of life and health in those with moderate or low income of improvements in the provision of public goods and services (Bartley et al., 1998; Lynch et al., 2000).

The literature on area differences in health has in fact highlighted a number of factors (Macintyre et al., 1993; Williams and Ecob, 1999) which might well be expected to affect women differently, and in some case more strongly, than men. The presence of adequate shops, services and transport and the security of the streets for example, might be more important for women. The nature of a 'healthy' local labour market, also, will be quite different for women. Large numbers of heavy, dirty and dangerous jobs such as mining create a trade off in health terms for men between income and health risk. A local economy with large numbers of clerical, sales and service jobs in contrast may leave a pool of 'unemployable' men at risk of all the accompanying health hazards while creating a situation in which women have greater employment prospects and thereby control over their living standards.

Our investigation focuses on the relationship between women's ill health and their personal and local material circumstances. We apply multilevel modelling to the ONS Longitudinal Study (LS) to analyse self-reported limiting long-term illness. The LS is a $1 \%$ linked sample of individuals from the 1971, 1981 and 1991 Censuses (Hattersley and Creeser, 1995) for England and Wales. The question on limiting longterm illness, new in the 1991 Census, asks whether the respondent had a long-term illness, health problem or handicap which limits her daily activities or the work she can do. The responses are referred to hereafter as LLTI. Interestingly, Dale (1993) notes that pre-census test on the LLTI correlated well with other data on GP consultancies and inpatient and outpatient visits to hospital. She argues that it provides the only nationally consistent indication of health service needs.

In this analysis geography is represented by a population hierarchy where local neighbourhoods coincide with the boundaries of electoral wards and larger areas are described by county district boundaries. This describes a three level hierarchy whereby individual women are
grouped in wards within county districts. The variation in LLTI is partitioned into three distinct components: individual variation between women living in wards; that between wards within larger county districts and finally the variation between county districts themselves. The variation between individuals and both levels of area is modelled by including characteristics drawn from the census which portray social composition at both the individual and area level. Inequalities in health between women are a subject of interest in their own right, but in addition, we compare the results with those obtained for men.

The first step in investigating the relationships between individuals, area and health is to see if we can explain the area differences entirely on the basis of the characteristics of the resident women alone. Sloggett et al. (1993) using mortality as an outcome first attempted to answer this question using the LS. The analysis involved ordinary (single level) regression, which combined individual characteristics and aggregated information on the area of residence at the individual level. This was the only technique available at the time. A subsequent comparison of single and multilevel analyses of LLTI using data from three decennial censuses by Gleave et al. (1999) showed very similar estimates of regression coefficients under both approaches. Multilevel modelling was able to quantify the variation left unexplained by individual attributes and measured characteristics of the area.

## 2. Background

Geographical variation in the mortality of both men and women, both between and within regions is well known (Britton et al., 1990; Sloggett et al., 1993). A health disadvantage to living in northern regions, 'the North-South divide', has long been noted (Shaper, 1984; Sloggett and Joshi, 1994; Ecob and Jones, 1998). Despite sharp, yet uneven, decline in national mortality rates since the 1980s (Phillimore et al., 1994; Drever and Whitehead, 1997), Britain in the 1990s has the largest regional mortality differences in the postwar period (Shaw et al., 1999).

In 1991 for the first time, a British Census included a question on long-term illness, which limits the activities of the individual. The results have shown sharp regional differences in this measure, which largely parallel those for mortality but limiting long-term illness is more
concentrated geographically than mortality (Langford and Bentham, 1996). By exploiting the spatial dimension in the LS we are in a position to reveal how far those women in poor health according to selfreports of LLTI are clustered in areas of high social deprivation and begin to explain why this might be.

These regional differences could be due to women with different personal histories and characteristics living in different areas: 'the compositional effect'. Alternatively, they could be due to a variety of 'contextual effects' as outlined above. What further insight does the literature provide about the relationship between health and deprivation?

There is a large literature on the identification and healthiness of 'deprived areas’ (e.g. Britton et al., 1990; Carstairs, 1995; Charlton, 1996). 'Deprivation' has usually been defined as some combination of variables measured in the census such as unemployment, low social class and poor quality or public rented housing. These indicators are often regarded as representing poverty, though they are not perfect proxies for low income. Townsend (1991) describes adverse effects on living standards and health of London's 'deprived neighbourhoods'. This implies that health variations would not be explained by individual characteristics alone, and that broader influences on health would be reflected in community-level factors. Macintrye et al. (1993) list ways in which areas may be more or less healthy than would be expected given the composition of their residents: physical features of the local environment (e.g. pollution, traffic); conditions at home/work/play (e.g. parks and gardens); the quality and accessibility of health and other services; activities in the neighbourhood such as crime or political activism; and the place's reputation. The latter may act to reinforce individual disadvantage. A further source of community health is the notion of social capital from 'feeling part of the community' (Mitchell et al., 2000). In this study civic engagement had a positive independent influence on health.

The interplay of local context, composition of the individuals living in the area and the individual's own characteristics have been investigated in a variety of ways. Macintyre and colleagues (1993) conducted a qualitative study of contextual contrasts between two areas of Glasgow. Quantitative approaches range from ecological studies of standardized mortality related to census-based indicators of deprivation (e.g. Eames et al., 1993), including variables relating to neighbourhood
socio-economic composition in a regression on individual characteristics (Sloggett and Joshi, 1994), and allowing interaction between individual and community-based variables (Blaxter, 1990). Multilevel modelling had previously been used to examine effects of area and area classifications (e.g. Congdon, 1995; Duncan et al., 1993; Gould and Jones, 1996; Shouls et al., 1996).

This paper applies multilevel modelling to individual data in the LS, the largest scale English and Welsh data source which enables ward level data to be confronted with data on individuals. Results using sin-gle-level regression analysis suggest that much of the variation in several health indicators (e.g. death, long-term illness and low birthweight), which is systematically associated with the 'deprivation' of the locality at previous censuses, can be statistically accounted for by the characteristics of the individuals living in each area (Sloggett and Joshi, 1998a and b). This suggests that if there are any contextual effects on health, they are not well detected by a crude uni-dimensional indicator of deprivation, although such deprivation measures are conveniently based on census evidence. Using census indicators, Charlton (1996) finds that rural wards appear 'healthy' whatever the level of deprivation. The degree of urbanization and of affluence are also an independent component of the contextual elements found, alongside important individual components, in variations between districts by Shouls et al. (1996), using the Sample of Anonymised Records (SARs) from the 1991 Census as a data source (CMU, 1993; Marsh, 1993; Marsh and Teague, 1992). The individual component was less salient in the multilevel analysis, by Humphreys and Carr-Hill (1991), of the Health and Lifestyle Study, clustered in 396 wards.

In our parallel work, on men, we did a multilevel analysis on sample of 69,352 also aged between 16 and 45 in 1971 (Wiggins et al., 1998). This revealed that the wide variations between districts in LLTI in 1991 were only partly explained by men's individual experience of unemployment, low social class and other disadvantages in 1971 and 1981. Further explanation was contributed by including the type of areas according to the ONS typology of districts (Wallace and Denham, 1996). We concluded that the experience of disadvantage over time affected the risk of reporting LLTI, but did not explain all of the geographical differences. Men with the same characteristics and work and migration histories report LLTI at different rates in different types
of area. In this paper we ask 'How does geography come into the explanation of social variations in LLTI for women??

The analysis for women moves forward from our previous multilevel exercises, in two important ways. Firstly, we extend our geographical hierarchy to include ward, as a proxy for neighbourhood, nested within county districts. Secondly, we typify the aggregate character of wards by using our own census-based scores. Districts are classified, using the ONS classification (Wallace and Denham, 1996), as in Wiggins et al. (1998). We are well aware that wards and county districts are imperfect descriptions of neighbourhood and space, and that cen-sus-based indicators have their limitations as either physical or psychological descriptions of the context.

To avoid substantial data loss we have abandoned any individual social classification or history based on occupational classification. These are especially unsatisfactory for women who do not always report an occupation, and for whom any occupation that is reported may not be a good indicator of her usual living standards. Those occupations, which are recorded for women, do not distinguish well between different levels of skill (Rees, 1992; Sacker et al., 2000). Furthermore, there are problems with identifying change of occupation over time, as classifications change (Blackwell, 1998). Instead, we follow the recommendation of Moser et al. (1988) and use access to a car and housing tenure over time as markers of individual circumstances. Arber (1991) suggests that such consumption measures may be equally or more revealing of a woman's class position than occupation, perhaps because they are resources that make a difference in a woman's everyday life. Macintyre et al. (1998) also suggest that they may not only be related to health because they are markers for income or psychological traits; they may also have some directly health promoting or damaging effects.

Our approach is, first, to clarify whether geographical variation is any greater than one would expect on the basis of the characteristics of the resident women alone. If it is, the second step is to explore the extent to which our characterisation of areas plays a role in understanding differences in limiting long-term illness both at the local and district level.

## 3. Method

### 3.1. Data source and structure

We took from the ONS-LS datafile 76,374 women aged between 16 and 45 in 1971 (and hence aged 36-65 in 1991 - a 30-year cohort) who had full census records at the three time points. This involved discarding $18 \%$ of women in this age group who were matched and traced into the LS in 1991 (when the LLTI question was first included) who were not also present in one or both previous censuses. In a minority of the cases the women are known to be immigrants (ca $5 \%$ ), but the main reason for omission is linkage failure, i.e. the women's records could not be matched into the LS or they were absent from the census. Linkage for this age group is at approximately average rates for the whole study (Hattersley and Creeser, 1995). They report in Chapter 5 overall backward linkage rates of $93 \%$ from 1981 and 91\% for 1991. Typically linkage failure affects the younger adults more than those in later middle age. A further $2 \%$ of the 1991 sample were discarded because their census record contained missing data or they were enumerated as a visitor or in a communal establishment. Finally just under 1\% ( 707 cases) with permanent sickness in 1971 or 1981 were also excluded from the analysis, in order to avoid, as far as possible, results being unduly influenced by the high chance certain individuals had of reporting limiting long-term illness in 1991. We note the possibility that housewives who were in very poor health may not have been identified by these questions, which are linked to those on economic activity, and would remain in our sample. The sample was clustered into 9,359 electoral wards nested within 403 county districts. For our sample the average number of women included in a ward is 8 and 191 per county district.

### 3.2. Limiting long-term illness

The outcome variable in the analysis is LLTI as described above.

### 3.3. Individual characteristics

In an attempt to explain the level of women's reported LLTI a number of individual characteristics are included in the model: age,
education, ethnicity, and three summary indicators combining 1971 to 1981 censuses to reflect material circumstances and migration. Car access and home ownership were as reported in 1971 and 1981 by the household. Intercensal migration was defined in terms of the woman's movement either within or between county districts. Finally, enumeration in the South-East in either 1971 or 1981 was used to account for any potential material benefits of residence in this region on individual circumstances (following Fielding, 1995). A summary table of individ-ual-level variables is shown in Table 1.

Table 1
Individual level variables used in the analysis

| Variable | Categories |
| :--- | :--- |
| Age in 1971 | Measured as continuous variable <br> Education <br> Ever resident in the South-East <br> Degree holder in 1971 and/or 1981 <br> Non degree holder <br> Ethnicity <br> Lived in South-East in 1971 or 1981 <br> Lived outside South-East in 1971 or 1981 <br> White <br> Caccess in household <br> Non-white <br> Housing tenure <br> No car in 1971 or 1981 <br> No car in 1971, car in 1981 <br> Car in 1971, car in 1981 <br> Non-owner in 1971 and 1981 <br> Mon-owner in 1971, owner in 1981 <br> Owner in 1971, non-owner in 1981 <br> Own 1971-1981 <br> Owner in 1971 and 1981 <br> Same district <br> Different district, same county <br> Different county |

The majority of these individual level variables are categorical. In the modelling results that follow estimates of the fixed effects of being a member of a particular category are given in contrast to a reference category which is always, and arbitrarily, the first named category in the table above. Age was centered on the average age of 29.9 years in 1971.

### 3.4. Ecological or geographical units of analysis

The second and third level units used in the analysis are respectively, the 9,359 wards and 403 county districts from 1991. Wards were characterised by 5 principal component scores derived from our analysis of 37 variables from the Small Area Statistics. For convenience these components have been labelled as deprivation (poverty versus affluence), area type (educated professionals (along with young children of school age) versus poorer manual families), demographic character (young families versus an older mixed population), settlement (young single people, often in private rented and terraced housing versus middle aged and larger families), and comfort (households with 2 or more cars, central heating (typically in rural locations) versus households with manual heads, a high proportion of working women and use of public transport). At the third level in the geographical hierarchy, county districts are described as belonging to one of twelve homogenous groups based on similarities derived from the 37 individual census items exactly as in Wallace and Denham (1996). The labels used in the ONS area classification and in our analysis are shown in Table 2 together with the number of districts in each group and the average percentage

Table 2
Average \% LLTI for women aged 36-65 years in 1991
reported by ONS district level classification

| Area classification | Number of districts | \% total districts | Mean \% LLTI |
| :--- | :---: | :---: | :---: |
| Coalfields | 43 | 10.72 | 18.0 |
| Ports and industry | 15 | 3.74 | 18.4 |
| Inner London | 17 | 4.24 | 15.5 |
| Manufacturing | 23 | 5.74 | 15.3 |
| Resort and retirement | 24 | 5.99 | 12.6 |
| Mixed economies | 37 | 9.23 | 12.4 |
| Mixed urban and rural | 44 | 10.97 | 12.3 |
| Services and education | 18 | 4.49 | 10.6 |
| Coast and countryside | 66 | 16.46 | 10.2 |
| Growth | 25 | 6.23 | 9.7 |
| Most prosperous | 86 | 21.45 | 8.3 |
| Scotland | 3 | 0.75 | 7.8 |
| Totals/overall LLTI | 401 | 100.00 | 12.9 |

of LLTI reported for the age group used in our investigation. The extent to which any of these raw percentages are due to differences in the age composition of each cluster of districts by ONS area classification is taken into account at an individual level in subsequent modelling. Age standardized LLTI rates (not shown here) reveal very little difference in the rank ordering of the clusters by observed LLTI percentages.

The areas classified as 'Ports and industry' and 'Coalfields' have the highest levels of reported LLTI whereas 'Growth' and 'Most prosperous' areas (and districts labelled 'Scotland' with very few districts) have the lowest.

### 3.5. Modelling strategy

In the exploration of the interplay of person and place in influences on women's health, multilevel modelling allows both area and individual effects to be represented in a three level population hierarchy. Individual women at level- 1 are nested within wards at level-2 and wards are nested within county districts at level-3. By separating out individual and area level characteristics it becomes possible to investigate how variables (our 5 principal component scores) defined at the ward level might affect the prevalence of limiting long-term illness over and above the contribution of a woman's characteristics. Similarly, the impact of the wider locality (county district) can be examined once the character of the ward and the individual resident's circumstances has been taken into account. All modelling was implemented by the software package MLwiN (Goldstein et al., 1998).

Formally, the appropriate statistical model for a binary outcome is described as a logistic multilevel regression model (Goldstein, 1991). All model estimation was carried out using the default estimation procedure for non-linear models, namely marginal quasi-likelihood (MQL) followed by predictive quasi-likelihood (PQL) (Goldstein, 1995, Chapter 7). The fixed part of the model is defined by a linear function of both individual and area level explanatory variables. The random part of the model identifies three components of variance: between districts (level-3), between wards within districts (level-2 variance) and that between individual women within wards (the level-1 variance). The inclusion of area level characteristics in the model is equivalent to attempting to model any between-area differences as identified in terms
of local or district effects. These area characteristics have been described above.

As age is expected a priori to be a predictor of LLTI status, it has to be included in any model. This simple model is referred to as our base model. It includes a quadratic term for age simply as a conventional device to improve statistical fit. This base model provides estimates of the two variance component estimates for ward differences within districts and between district differences. In terms of our central research question then, our objective is first to see whether or not we can formally identify between-area differences and if so, to see if we can explain any such differences in terms of the characteristics of the individual women who reside there and then the nature of these areas (composition). In modelling terms we proceed sequentially. First, after fitting the base model, we include all individual characteristics in the model and then check, by means of backward elimination of each characteristic in turn, whether or not a statistically significant contribution is made to the model (based on the reduction in the log likelihood, Goldstein et al., 1998, p. 32). For the remaining variables we next test for the presence of interactions at the individual level. The resulting model is described as our interim 1 model (if you prefer, a 'reduced main effects and interactions' model). A second interim model is then fitted by attempting to explain any remaining ward level differences (interim 2) by including ward scores at level-2. Finally, the level-3 ONS area classification is included as a dummy variable to reduce any area level variance at the district level. This results in our final model. The results for all three models are presented in Table 3. The interpretation of the modelling follows two strands. Firstly, the interpretation of the fixed part of the model and its ability to explain differences between areas. Fixed effects can be thought of as representing a typical or average effect of individual variables such as ethnicity, or the impact of the character of the area itself, on the risks of reporting LLTI across the whole sample. Secondly, district level residuals are mapped at each stage of modelling to reveal the extent to which any district has an excess of ill health or 'good' health. The small number of women observed in any ward mean that mapping ward level residuals would be unreliable.

Table 3
Baseline, interim and final models for LLTI as a binary outcome for 76,374 women aged 16-45 in 1971 nested within 401 county districts in England and Wales (standard errors are given in parentheses)

| Terms | Base model | Interim model 1 | Interim model 2 | Final model |
| :---: | :---: | :---: | :---: | :---: |
| Fixed effects <br> Individual (level-1) |  |  |  |  |
|  |  |  |  |  |
| Constant | - $2.138(0.025)^{*}$ | - 1.825 (0.086)* | - 1.847 (0.085)* | - 1.636 (0.097)* |
| Age | 0.072 (0.002)* | 0.068 (0.004)* | 0.068 (0.003)* | 0.068 (0.003)* |
| Age ${ }^{2}$ | - 0.001 (0.000)* | - 0.001 (0.000)* | - 0.001 (0.000)* | - 0.001 (0.000)* |
| Not in South-East in ' 81 or '91 |  | 0.275 (0.033)* | 0.118 (0.031)* | 0.092 (0.035)* |
| No degree |  | 0.371 (0.074)* | 0.315 (0.075)* | 0.313 (0.075)* |
| Non-white |  | 0.683 (0.066)* | 0.597 (0.067)* | 0.609 (0.068)* |
| Cars (linear effect) |  | - 0.204 (0.011)* | - 0.172 (0.011)* | - 0.170 (0.011)* |
| Owner occupier in '71 and '81 |  | $-0.436(0.025)^{*}$ | - 0.357 (0.026)* | - 0.363 (0.026)* |
| Interaction |  |  |  |  |
| Cars * Age |  | 0.004 (0.001)* | 0.004 (0.001)* | 0.004 (0.001)* |
| W ard (level-2) |  |  |  |  |
| Poverty/affluence score |  |  | 0.185 (0.012)* | 0.158 (0.014)* |
| Area type score |  |  | - 0.092 (0.013)* | - 0.086 (0.014)* |
| Demographic score |  |  | 0.034 (0.013)* | 0.037 (0.014)* |
| County district (level-3) |  |  |  |  |
| 'Scotland' |  |  |  | - 0.769 (0.303)* |
| Coastal |  |  |  | - 0.280 (0.060)* |
| Mixed urban and rural |  |  |  | - 0.183 (0.057)* |
| Growth |  |  |  | - 0.240 (0.055)* |
| Most prosperous |  |  |  | - 0.285 (0.082* |
| Services and education |  |  |  | - 0.230 (0.079)* |
| Resort and retirement |  |  |  | - 0.115 (0.076)* |
| Mixed economies |  |  |  | - 0.249 (0.060)* |
| Manufacturing |  |  |  | - 0.125 (0.059)* |
| Ports and industry |  |  |  | - 0.136 (0.059)* |
| Inner London |  |  |  | - 0.221 (0.079)* |
| Random effects |  |  |  |  |
| Individual | 1.0 | 1.0 | 1.0 | 1.0 |
| Ward | 0.096 (0.017) | 0.036 (0.015) | 0.021 (0.014) | 0.018 (0.014) |
| County district | 0.119 (0.013) | 0.049 (0.008) | 0.011 (0.04) | 0.009 (0.004) |
| Log likelihood | 30,757.8 | 27,529.1 | 26,641.7 | 26,718.4 |

* Significantly different from zero at $95 \%$ confidence.


## 4. Results

### 4.1. The interplay of individual and area level differences

The estimates for fixed and random effects are given for each of the four stages of modelling in Table 3. The models are labelled base, where age terms are the only individual characteristics included in the model; interim 1 which includes individual characteristics (or reduced and relevant interaction terms) in addition to the age terms; interim 2 which begins to model area variation by including ward scores at level2; and fourthly, the final model completes the list with a categorical variable to describe the classification of the county district at level-3.

### 4.2. Random effects

Once we take account of a woman's age there are still differences between areas at both the ward and district levels. These estimates of area differences are variances of the estimated residual terms associated at each level. Here a level- 2 variance of 0.096 for ward differences and a level-3 variance of 0.119 for districts, which are both statistically significant. In terms of our research question the challenge now is to see to what extent the inclusion of further terms, first about the woman and then about the localities, can explain these differences.

The inclusion of individual level characteristics at level-1 reduces the variance component at level- 2 by almost two-thirds (a reduction of level- 2 variance to 0.036 in interim model 1) as well as marking a dramatic reduction in the level-3 variance (by $59 \%$ to 0.049 ). Thus area differences at both the ward and district levels decrease convincingly once we take account of the characteristics of the women who make up the local populations. We will return to this observation in our analysis of district level residuals below, and to the individual predictors of women's health as described below. What further gains are there in the reduction of area differences if we now explore the impact of including the ward characteristics? Of the original 5 ward scores described earlier only three achieve any significance in the model. The addition of the ward scores in our interim model 2 achieves a successive reduction in the variance at both levels ( $42 \%$ to 0.021 for wards and $78 \%$ for county districts from 0.049 to 0.011 ). For the final model, which includes the ONS classification, we hardly see any further variance reduction.

### 4.3. Fixed effects

Women's individual circumstances provide an important explanation of between area differences. The base model confirms a positive relationship between a woman's age and her probability of reporting a LLTI. The age quadratic term suggests stronger effects as age 65 approaches. Being non-white, without a degree (the only level of qualifications distinguished in the census), and not recorded as residing in the South-East, all contribute to increased risk of women reporting LLTI. Further, being without access to a car in ' 71 and ' 81 and/or not being in owner occupancy for these time points also increases this risk. In Table 3 car access is reported as a linear effect. Thus the categories presented in Table 1 for car access can be read as an arithmetic scale from 0 to 3. Housing tenure is reported as a dichotomous variable as the fixed effects estimates for categories distinguishing between different states of owner occupancy in 1971 or 1981 were not very different. The migration history variable was non-significant and it is not included in Table 3 . The only significant interaction term to remain at the individual level was the joint effect of car access and age. It could well be that car access for older women becomes a necessity as a result of their health status. At an area level the nature of the immediate locality has an effect on the risk attributed to individual circumstance. Notably, living in a poor ward and/or a ward where there is a preponderance of young families increases risk of poor health over and above a woman's characteristics. Being in a ward where there are a large number of educated families with young children will reduce that health risk for a woman. At a district level, being in any district other than a (former) Coalfield (the reference category) reduces individual risk. If anything, living in a district classified as a Resort and Retirement, Manufacturing or Port and Industry puts women closest to those with similar circumstances living in the Coalfields. This group stands in contrast to those living in districts described as 'Most prosperous' or 'Growth areas'. However, it must be noted that whilst the district classification produces a fine tune on individual health risk it does not provide much by way of further explanation of between-area differences. The locality as described by the ward has a greater impact.

Allowing the fixed effects to vary within areas revealed no evidence of any differential effects. Our interpretation of the fixed part of the model is, therefore, reliable across different types of area.

### 4.4. Residual analysis to confirm our model interpretation

This section replicates an analysis of district level residuals reported for men (Wiggins et al., 1998). Any examination of ward level residuals was ruled out, as each estimate would only be based on a few women (typically <10). Figure 1 maps the distribution of \%LLTI at a district level for women prior to any analysis. A 'North-South divide' line has been imposed on the maps following Sloggett and Joshi (1994). There are more 'pockets' or concentrations of higher levels of reported LLTI in the North compared to the South but there is not a clear divide. There are notable concentrations of high \%LLTI in districts located in Inner London, the South-West and the Isle of Wight.

An exploration of district level residuals enables us to examine what happens to the pattern of outliers as we systematically take account of information about the characteristics of women, their neighbourhoods and surrounding districts. A district level residual marks out the extent to which any excess or deficit of reported LLTI is observed at each stage of the modelling. A residual, which is described as having more reported LLTI than is predicted by multilevel regression, is an 'unhealthy' district. Whereas a residual, which has less reported LLTI than is predicted by the model, will convey the opposite 'healthy' effect of area. Residual plots are presented in Figures 2 and 3 below. Any residual, which is not plotted, simply includes zero in their $95 \%$ confidence intervals.

Taking account of the age distribution of women (our base model) explains a lot of the district level variation in rates of reported LLTI. Those districts that remain as outliers throw the North-South divide into sharp focus. Only two districts in the South (one Inner London Borough and one area on the outskirts of West of London in Berkshire) report higher levels of expected LLTI, whereas the majority of excess levels of reported LLTI are north of the divide. Indeed, it is only in the South-East and South-West that we see health benefits. How does the picture change as we take account of women's individual circumstances?

Firstly, the number of significant residuals is reduced considerably. Our account of individual circumstances has done a lot to explain healthy area effects at the district level. The persistent unhealthy districts remain in parts of the North West, North and East and South Wales. A solitary healthy district stands out in South (an outer

Figure 1
\% LLTI for LS women aged 36-65 years in 1991 by county district


Figure 2
Outlier county district residuals for base model for LS women aged 36-65 years in 1991


Figure 3
Outlier county district residuals for interim model 1 for LS women aged 36-65 years in 1991


London Borough). Once we introduce ward scores to characterise the neighbourhoods into the model these disparities largely disappear from the map. Providing further confirmation that spatial differences in reported LLTI for women can be largely accounted for by taking account of individual and local circumstance. Thus the scope for providing more visual displays of residuals ends with interim model 1. Whilst broader regional differences do affect the overall risk for the individual they do not add very much in terms of explaining the area differences reported in the raw data. Finally, the value of the log likelihood reported in Table 3 suggests that we are not strictly seeing a steady improvement in statistical fit beyond interim model 2. If anything the values are broadly similar between interim model 2 and the final model.

## 5. Discussion

For the first time this century in England and Wales with the inclusion of a question of limiting long-term illness in the 1991 Census it has been possible to observe the pattern of geographical variations in LLTI (Charlton and Wallace, 1994).

We have been able to pioneer the multilevel analysis of individual records in the ONS-LS. Earlier work (e.g. Congdon, 1995; Duncan et al., 1993; Shouls et al., 1996) has emphasised the importance of multilevel framework to better understand geographical variations in LLTI. Despite differences in the degrees of geographical clustering and coverage our findings are in broad agreement. Gould and Jones (1996) conclude that the variations between SAR areas remain substantial even when individual characteristics are taken into account. Unlike Congdon (1995) and Shouls et al. (1996) they did not attempt to model or explain between-place variation. Shouls et al. (1996) provide evidence of a stronger ecological effect for men than for women as well as for the interaction between individual and area level characteristics. From their interpretation it would appear that the differences between more and less deprived individuals are marked in affluent areas, rather than in more deprived areas. In future work we plan to explore similar interactions to better understand the interplay between individual and area level characteristics.

We have found that cars and home ownership were useful markers of social and material advantage apparently protecting against the risk
of reporting LLTI. Migration into or living in the South-East region appeared beneficial, but otherwise there was not much effect of moving home. After also adjusting for a woman's individual circumstances (education and ethnicity), county district differences persist. It appears that almost all of the remaining area differences are explained by the social profile of wards in these areas. Whilst living in a (former) Coalfield does increase the individual health risk it does less in terms of accounting for area differences. This represents a notable difference in the finding for men (Wiggins et al., 1999), where the ONS classification reduced the district level variance by nearly a half once ward scores were added to the model. For women the equivalent relative reduction is less than a fifth ( 0.011 to 0.009 ). For men, the majority of county districts with a high level of unexplained reported rates of LLTI are largely classified as Coalfields (past or present). This suggests two possible interpretations. The first is that the health of men in these places was more directly affected by the mining and heavy industrial activity because they were more likely to have been involved themselves in potentially harmful activities. However, we did find stronger geographical differentials for men in analyses which made some allowance for individual occupations.

Another interpretation, which could also complement the first, is that the reporting of limiting long-term illness is socially as well as biologically gendered. The concept presupposes a notion of a normal level of activity. In a context where local industrial change has removed many of the traditional employment opportunities for men, but less so for women, more men will find themselves unable to find employment. In other geographical contexts these men might otherwise be employed. Under these circumstances it is not clear whether supply or demand limits activity. The fusion of long-term unemployment and long-term ill health is compounded by the effect of morale and a sense of control (Wilkinson, 1996) on health and by specific gendered institutions in the British social insurance and support system.

The bureaucratic confirmation of a long-term sick status was much more likely to apply to men than to women. The term 'unemployment' is often associated with drawing benefit. There are two reasons why the benefit system tends not to treat married women and claimants in their own right. For most of this period, most married women opted out of National Insurance in their own right, relying on their husband's insurance. This option started to be phased out in
1977. Even after that, married women could not make claims for means tested benefits except as a couple. During the 1980s the benefit system started to treat many (particularly male) claimants in their 50 s and 60 s as invalidity pensioners rather than unemployed. As women's perceptions of what they would normally be expected to do would cover domestic work and different sorts of employment from men's, there is a limit to which we can make direct pronouncements on gender differences in the individual propensity to report LLTI. We generally find more variability in LLTI for men at the district, or local labour market level than women. By the 1980s geographical variations in women's employment participation in Britain had become relatively minor, but traditionally (i.e. up to the 1970s) it had tended to be low [in the regions] where men's long-term illness tended to be high, particularly districts associated with mining and heavy industry. This applies particularly to South Wales, but a notable exception is the high female employment in the textile towns of the North-West (see Joshi and Hinde, 1993; Ward and Dale, 1991; Joshi, 1984). Thus if areas with the highest levels of reported male LLTI were also (to some extent) areas with the greatest differences in the gender division of paid labour, and of lifestyle, this could give rise to the differential geographical patterning by gender. We cannot however exclude the possibility that what we are seeing is a gender difference in a set of reactions to industrial decline. For men, in the affected labour markets, this is more manifest as the reporting of limiting long-term illness than it is for women. We can draw support for there being economic influences on reporting from our other analyses on current morbidity reported in survey data (Mitchell et al., 2000).

## 6. Conclusion

The use of multilevel modelling has enabled us to analyse the risks of women aged 16-45 years in 1971 reporting LLTI in 1991 in a framework that divides area variation into two distinct components: that between localities (wards) within county districts and that between districts themselves. The modelling recognises the clustering of women's residential location by defining a population hierarchy based on administrative boundaries. These areas convey the role of geography, and the resulting social and economic characterisation of areas, in
explaining illness reporting. In particular, any evidence for a 'NorthSouth divide' in reported LLTI for women can be largely explained by the variables measuring characteristics of individuals and wards, which we have been able to include.

Blane et al. (1996) suggest that illness behaviour is shaped by the social environment and reflects the impact of disease on the ability to carry out social roles. What we have been able to show for women, as well as men, is that a set of variables reflecting material circumstances at the individual level: car access and home ownership, education, ethnicity and observation in the South-East help to explain the regional variation in reported illness, but not completely. Prevalence of LLTI also varies between localities defined by their social profile, even for women with similar individual characteristics. Most important is the influential role of aggregated ward characteristics for women's health over and above these individual similarities. Characteristics of the local economy, which do relate to variations in men's reported illness are less relevant to women. Where a woman lives matters much more in terms of her local neighbourhood than the wider socio-economic landscape.

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# WOMEN AND HEALTH INSURANCE: THE SITUATION OF WOMEN AS DEPENDANTS IN TURKEY 

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#### Abstract

Not only biological conditions and medical services but also gender, income, social support arrangements, education, employment, working conditions, culture have important influence on bealth status. Still another determinant of health status is gender blindness in carrying out research studies on bealth. Gender sensitive approach is needed to get unbiased knowledge. This helps to attain equity in bealth in the long run by implementing appropriate measures. In this study, the position of women regarding inequalities in access to bealth services is conceptualised. Health problems as well as social and cultural constraints which are specific for women are aimed to be investigated and means for inquiring these issues are proposed. The problems arising from the bealth insurance system are outlined and through questionnaire form of "W omen and Health Module" the determination of the complete system regarding use of bealth insurance is suggested. The information obtained after the implementation of the module will be useful in the establishment of relationship between socio-economic characteristics of persons and use of health services. A specific reference of the study will be use of health services through health insurance system.


Keywords: Health status, Health insurance, Dependence, Health equity, Dual records method, Women and health module.

## Résumé

Non seulement les facteurs biologiques et les services médicaux, mais aussi le sexe, le revenu, les systèmes de solidarité, l'éducation, l'emploi, les conditions de travail et la culture ont une grande influence sur la santé. Ily a un autre élément qui n'est pas sans effet, c'est l'absence de prise en compte de la problématique du genre dans les recherches en matière de santé. Une approche qui intègre les rapports sociaux entre les sexes est indispensable pour produire des connaissances non biaisées. A long terme, par la mise en cuvre de mesures appropriées, elle permet d'atteindre l'égalité des sexes dans le domaine de la santé. Dans cette étude, les auteurs conceptualisent la situation des femmes en matière d'inégalités d'accès aux services de santé. L'objectif est d'examiner les problèmes de santé et les contraintes sociales et culturelles qui touchent particulièrement les femmes, et de proposer des voies d'analyse. Les auteurs présentent les problèmes liés au système d'assurance maladie et, au moyen du questionnaire du "module femmes et santé", proposent une description d'ensemble du système et de la manière dont il est utilisé. L'information recueillie après la mise en cuvre du module «femmes et santé» servira à établir les relations entre les caractéristiques socio-économiques des personnes et le recours aux services de santé. Le thème central de cette étude est le recours aux soins de santé par le biais du système d'assurance maladie.

Mots-clés : État de santé, Assurance maladie, Dépendance, Égalité en matière de santé, Méthode de double collecte, Module "femmes et santé".

## 1. Introduction ${ }^{1}$

There is a need for comprehensive understanding of women's health status which has been neglected for long time in Turkey. A specific module on women's health is aimed to be launched to fill this gap in the Turkish Population Survey which will be held in 2001. There are mainly four steps in exploring a research topic regardless of being qualitative or quantitative. Data collection, analysis, interpretation and the utilization of the attained information are consecutive steps in empirical investigations (Hentschel, 1997). This paper is concerned with

[^38]the first step in this scheme, data collection. Perceived or self-rated health status, rather than long-standing health conditions will be basis for the evaluation of health. Hopefully, the other three steps will be used to reach a complete review and analysis of the research study after the completion of field work of the survey.

In the second section obstacles preventing the attainment of equity in health are emphasized. Generally, gender is omitted in health studies. There is a considerable literature discussing how inclusion of gender in research studies works as an initial stage in ending inequality between women and men. It is stated that neglect of gender works as an impediment for the attainment of women's health profile without bias. Moss (this volume) argued that improvement in vital statistics and disease statistics is indispensable for the attainment of progress in women's health. The third section gives a brief history of health insurance system in Turkey regarding the way through which persons are covered by the system. The differences between women and men in employment status, sectoral distribution of employment, coverage by health insurance scheme are emphasized in this section. It gives reasons for women's dependency on men in utilizing health services. The fourth section introduces population and health surveys implemented so far in Turkey and their implication for women's health. This section contains some suggestions to improve conventional population and health surveys. The fifth section introduces a technique as an alternative to conventional survey, dual records method. It is based on the matching of informations coming from civil registration and a survey. The sixth section is on a specific module set forth in the main part of population and health survey, Women and Health Module. The module aims to shed light upon issues on women's health which have not been explored so far in Turkey. The last section briefly concludes the study by enumerating the expected output.

## 2. The need for mainstreaming gender in health system

Gender is a social and cultural category determining roles and responsibilities associated with both sexes. Hence it does not relate to the determination of biological differences. It concerns the understanding of differentiation in thinking and act between women and men and in perception by others which results from the way society is con-
structed (WHO, 1998). Generally women are dominated by their partners or in-laws in such a way that they are restricted in their behaviours regarding their expenditure, nourishment, use of health services (Moss, this volume). Women's desire to access into health services is affected from place of settlement, perceived health status, presence of health insurance, the mean by which insurance is attained and the degree of bureaucracy in the delivery of services. Once women decide to have health services, age, education, women's standing in public life and at household level affect the diagnosis and treatment they get from health institution. It is essential to carry out research to understand the ways in which gender exposes men and women to different environments and how they react to such differences (Östlin et al., 2000).

Attainment of a reasonably healthy and prosperous life necessitates to lead a life with a degree of economic independence. The distribution of endowments and liabilities such as work, time, money within the family reflects the relative economic resources that women and men command. Women's higher economic dependence makes them more vulnerable than men to poverty. It is stated by Östlin et al. (2000) that equity in health can only be achieved through the fair distribution of resources, benefits and responsibilities between women and men. Equity in health requires more than a mere establishment of well being in society. Traditional measurement of poverty at family or household level fails to recognize poverty of some women who are economically dependent on men (Lister, 1994). It is stated by Arber (1991) that consumption measures rather than occupation may indicate better the class position of women since they create differentiation in women's everyday lives. It is further argued by Moss (this volume) that:
"The epidemiologists and demographers who write about the impact of socioeconomic position, poverty or income inequality and health have often failed to consider the processes within households and in women's daily lives that may actually shape their health or the health of men."
Although the extent differs, "feminisation of poverty" prevails in all societies. Poverty determines women's access to education as well as the type of occupations open for persons, quality of health care and the safety of environment. Moreover, women's secondary position in society makes development of mental health difficult for them. Struggles against inequalities starting from early childhood affect their psychology negatively (Doyal, 1998). Poverty, isolation from outside world, low education, dependence on others, patriarchal oppression
and violence increase the risk of psychiatric morbidity in women (UN, 1998).

Brocas et al. (1990) underlined the importance of persons' access to social security benefits in their own right as individual. The establishment of a system in which individuals are treated equally is emphasized. In this way it is possible to guarantee the protection of individuals in an environment where family break-ups are widespread. The reliance on husband's pension for income in later life has proved to be inadequate and risky for women due to increase in lone parenthood and divorce rate (Ginn and Arber, 1994). Although women have to meet many different responsibilities both in house and outside, paid employment out of the home brings about self-esteem, financial and social support for women.

There is marked difference between women and men with respect to health issues. Women live longer than men of same or comparable society. Improvement in living standards, economic development and social change contributes to women's biological advantage and the gap between life expectancy for women and men widens (UNDP, 1995). On the other hand, greater longevity of women does not guarantee a healthier life for them. Not only biological factors but also social ones contribute to differences between women and men. Garcia-Moreno (1997) stated that contrary to their relative positions in longevity, level of illness and disability are higher for women. She cited three main factors contributing to their disadvantageous position as: (1) those associated with their greater longevity, (2) the reasons associated with women's reproductive capacity, (3) the higher incidence for women of symptoms of mental distress.

There is need for the assessment of different needs of persons in development, implementation, monitoring and evaluation of health care services. One of the aspects of this issue is the integration of gender perspective into the health policies for the achievement of women's coverage in the health system.

Conventional health services for women focus mainly on reproductive functions and ignore other health needs of women. Moreover, traditional health care relates only to child health, further neglecting the needs of women (Paolissio and Leslie, 1995).

The Platform for Action emphasizes a holistic and life-cycle approach to women's health in the implementation of five strategic ob-
jectives. ${ }^{2}$ Mainstreaming a gender perspective into health studies requires the development of a comprehensive women's health profile. Only in this way, the picture of women's health position not only in demography and reproductive health but also with regard to socioeconomic status, overall health status, life style, environment, health care services, health service use, sexuality may be attained (UN, 1998).

## 3. Gender inequality in access to health services in Turkey

As in many other countries, main objectives of health services in Turkey are connected with the general health status of population. Women are on the scene as long as their health problems are related with their reproductive functions. Pronatalist population policy was implemented between 1923-1960 and antinatalist population policy put into force after 1960. The shift in population policy is manifested in the population planning law of 1965 (HIPS, 1999). However, there has not been any important change in the evaluation of women's health until 1990 and women's health has been equated with mother and child health. A new trend began after 1990 and private institutions specialised in women's health have started to operate.

The most important reason behind inequality between women and men in accessing health services is the fact that the health insurance system in operation does not fit to the conditions in Turkey and there are problems arising from misfunctioning. A person may be covered together with his/her dependants by compulsory health insurance under the umbrella of social security only if he/she has an income generating activity in the formal sector. Individual's mother, father, partner (usually wife) and children may benefit from health insurance as dependants if they are not covered in their own right.

[^39]In the history of social security in Turkey, firstly, public sector employees were covered by health insurance. Health insurance scheme covered only a limited number of employees in 1930 and it was extended to include all employees working in the public sector in 1946. At the same time, the system was reviewed and expanded to cover wage earners working in private, non-agricultural sectors and their dependants under compulsory insurance scheme. Lastly, employees in agriculture, employers and self-employed persons were covered by compulsory insurance in 1971. However, the majority of employed women who are working as unpaid family workers ( $75 \%$ of total women employment in 1990) are still out of the system.
$13.2 \%$ of women in urban areas of settlement and $46.6 \%$ of women in rural areas of settlement are employed in 1999 (SIS, 1999). Approximately half of the women are working in the informal sector in urban places and thus are not covered by social security scheme. Moreover $72.2 \%$ of total employed women are working in agriculture and $87.5 \%$ of them are unpaid family workers. For this reason, only a few employed women are covered by social insurance in their own right. Women, most of the time, remain out of social security coverage since the system of social security does not function properly even for employed persons working in the formal sector due to ignorance, lack of consciousness regarding its importance.

Although their main objectives, methods, samples used differ, percentages of population covered by health insurance are similar according to 1993 Demographic and Health Survey and 1994 Income Distribution Survey. 51.8\% of women aged between 15-49 and 58.2\% of men who are husbands of aforementioned women are covered by health insurance according to 1993 Demographic and Health Survey. The corresponding figures are $55.3 \%$ and $53.6 \%$ for women and men aged 15 years and over respectively according to 1994 Income Distribution Survey. 1998 Demographic and Health Survey results reveal that a slight increase has been observed for both women and men with regard to health insurance coverage: $57.2 \%$ of women and $61.7 \%$ of men are covered by health insurance in 1998 (Table 1).

Women working in agriculture constitute $76.4 \%$ of women according to the 1994 Income Distribution Survey. The share of women in industry and services in total women's employment are $9.7 \%$ and $13.9 \%$ respectively. The situation is quite different for men: $34.6 \%$ of employed men work in agriculture and $17.7 \%$ of them are employed in
industry. Share of men employed in services sector among total employed men is $47.7 \%$ (Figure 1).

Table 1
Population covered by health insurance (\%)

|  | $1993{ }^{a}$ | $1994^{b}$ | $1998^{a}$ |
| :--- | :---: | :---: | :---: |
| Women | 51.8 | 55.3 | 57.2 |
| Men | 58.2 | 53.6 | 61.7 |

a. HIPS, 1993 and 1998; calculated for married women aged between 15-49 and their husbands. b. SIS, 1994; calculated for women and men aged 15 years and over.

Figure 1
Distribution of employment by sector (\%)
(Population of 15 years and over)


The percentage of women covered by health insurance is lowest for agriculture while it is highest for services sector. Only $31.7 \%$ of women in agriculture are covered by health insurance. Coverage by health insurance is $71.0 \%$ and $84.9 \%$ for women employed in industry and services sectors respectively. $25.1 \%$ of men employed in agriculture are within health insurance system. The corresponding figures are $71.2 \%$ and $62.1 \%$ for men employed in industry and services sectors respectively (Figure 2).

Figure 2
Coverage of health insurance by sector (\%)
(Population of 15 years and over)


Figure 3 demonstrates the possibilities for being covered by health insurance scheme for women who are either not working or working but not covered by health insurance. Women may remain covered by health insurance throughout their lifetime provided that their fathers/ mothers and husbands are covered. $45.3 \%$ of married women who are employed as compared to $55.1 \%$ of married women who are not employed are covered under the umbrella of health insurance in 1993. Among married women who are covered by health insurance, more than nine tenth of women who are not employed and more than half of women who are employed are insured through their husband in 1993. The corresponding figures are $95.4 \%$ and $53.2 \%$ for married women who are not employed and who are employed respectively in 1998. While $49.7 \%$ of unmarried working women are insured in their own right, $50.3 \%$ of them are insured through their mother or father in 1998. Women who are not economically active are covered by health insurance scheme only if their mother or father have health insurance (Table 2).

However, access into health services as dependants of persons is by no means a privilege. It is a result of a system which places the person who is employed to the center. The reasons behind the construction of a family in which women generally remain out of labour force are ignored for most of the time. Dependency, if not in health insurance, in other areas of life continues to prevail even for women who
are employed. Nowadays, system allows women to have voluntary social security. However, according to the 1998 Turkish Demographic and Health Survey, $80 \%$ of women do not have personal income and among those who have personal income, only $49 \%$ decide autonomously how to use their income. These obstacles prevent women from having voluntary social security (HIPS, 1999).

Figure 3
The conditions to access into health services
for women who are not working or working without health insurance



| FATHER/ | BIRTH | MARRIAGE | DEATH OF HUSBAND |
| :---: | :---: | :---: | :---: |
| MOTHER | WOMAN DOES NOT | WOMAN HAS H.I | WOMAN HAS H.I. <br> THROUGH HER HUSB. |
| $\frac{\text { DO NOT }}{\text { HAVE }}$ | HAVE H.I. | THROUGH | WOMAN |
| HUSBAND |  | HER HUSB. | DOES NOT HAVE H.I. |
| HAS H.I. |  |  | DIVORCE |


| FATHER/ | BIRTH | MARRIAGE | DEATH OF HUSBAND |
| :---: | :---: | :---: | :---: |
| MOTHER | WOMAN | WOMAN | WOMAN |
| AND | DOES NOT | DOES NOT | DOES NOT HAVE H.I. |
| HUSBAND | HAVE H.I. | HAVE H.I. | WOMAN |
| DO NOT |  |  | DOES NOT HAVE H.I. |
| HAVE H.I. |  |  | DIVORCE |

H.I. : Health insurance.

Table 2
Percentage of women covered by health insurance by source of insurance

| Health insurance scheme <br> coverage | 1993 |  | 1998 |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Married |  | Married |  | Never married |  |
|  | Em- <br> ployed | Not <br> employed | Em- <br> ployed | Not <br> employed | Em- <br> ployed | Not <br> employed |
| Covered: | 45.3 | 55.1 | 57.7 | 56.9 | 58.5 | 57.6 |
| - in their own right | 44.1 | - | 43.6 | - | 49.7 | - |
| - through their busband | 52.9 | 95.2 | 53.2 | 95.4 | - | - |
| - through their mother/father | 2.2 | 3.6 | 3.2 | 4.6 | 50.3 | 100.0 |
| - but source is unknown | 0.8 | 1.3 | - | - | - | - |
| Not covered | 54.7 | 44.9 | 42.3 | 43.1 | 41.5 | 42.4 |

Source: HIPS, 1993 and 1998.

## 4. Women's place in research on population and health in Turkey

Antinatalist population policies were put into force in 1960 in Turkey. After this change in population policy, population and health surveys have been carried out every five years regularly since 1963. These surveys collected information mainly on fertility, family planning, infant and child morbidity, infant and child mortality. Health status of women and use of health services by women are questioned only when these are directly related with children's health. Furthermore, reproductive health of women has never been studied as a separate subject. Women Module which covers information on women's status in connection with child care and child health added to main body of the Demographic and Health Surveys of 1993 and 1998. It may be said that women are not visible in population and health surveys for themselves and women's health is not emphasized for issues other than women's reproductive roles.

Conventional approach in designing a research on health lacks insight into biological and social differences between women and men. Gender sensitive research design is required for the attainment of gender differentials which is indispensable for research and policy formulation. Absence of a complete vital registration system is one of the
main reasons behind the failure in provision of complete picture of women's health status. However, this is compounded by either gender blindness or by complicated social issues which is reflected in women's health problems. Hence, there is need for the improvement of vital statistics in such a way that differences between women and men in morbidity and causes of mortality as well as in the use of health services can be acquired. Ignoring biological differences between women and men and assuming that they differ only in their reproductive systems result in mistakes. Collecting information on health status of women with gender awareness requires more than merely disaggregating the data by sex. Apart from biomedical and epidemiological data, socioeconomic data too is needed. Collection of qualitative data is important for attaining data on socioeconomic factors that affect women's health. Inequalities in health status between women and men and women's unequal treatment in health care need to be questioned in detail.

## 5. Implementation of dual records method in Turkey

Dual Records System which is an extension of the direct matching technique uses two independent steps to collect data on vital events: one is the civil registration and the other is a survey. Information from two sources is then matched. The use of this technique to evaluate registration coverage brings about considerable improvements in the long run (UN, 1999).

Until now, mainly two studies which employed the Dual Records Method implemented in Turkey. The first was carried out in 1966-1967 and the second one was carried out in 1974-1975.

Two independent methods were used to collect the data of "Vital Statistics from the Turkish Demographic Survey" implemented in the 1966-1967 period. The first employed a local resident-registrar who made regular monthly visits to each household in his assigned area and reported to the Central Office the demographic changes which have occurred in the household during the past month. The second method employed a staff supervisor who independently called on each of these same households every six months. The two reports were matched and all mismatches were field or letter verified (MHSW, 1970).

The second survey which made use of dual records method between 1974-1975 has not been as successful as the first one. The prob-
lems faced in the field were connected with inadequacy of instructions given to interviewers, inappropriate weather conditions for an extensive research (SIS, 1975).

## 6. Women and Health Module

### 6.1. The rationale for implementation of Women and Health Module within the framework of Turkish Population and Health Survey

Although low coverage of persons by compulsory health insurance is a problem by itself, more important problem is the difficulty in assessing the mean by which persons utilize health services. The system in Turkey which enables persons to be insured through other persons forms a complicated situation. It is not known whether a person is insured in his (her) own right or through other persons. The situation is more serious for women since use of health services through others' health insurance as dependants is more common among women. The health insurance system in Turkey requires radical changes. The present system is neither efficient nor equality promoting. A system in which every person is insured in their own right is required. The establishment of such a system is necessary to prevent evasion in paying premiums which is observed in current system. A rational and equality based approach is needed for both (1) the purpose of increasing the quality of health services with awareness of different needs of women and men in health services and (2) the attainment of a more egalitarian system in which health is realised not as a privilege but as a basic human right and persons are insured individually for themselves.

Use of dual records method serves as an initial stage towards improvement of health statistics which is a prerequisite for elimination of ambiguity with regard to the functioning of current health insurance scheme. The Women and Health Module which is designed within the main body of Turkish Population Survey aims to attain a complete and intersectoral picture (i.e. interaction of health with education, labour force participation, marital status, family background and other socioeconomic, cultural, physical conditions) of women with reference to health. Then whole data collected through survey will be compared and matched with data acquired through civil registration.

### 6.2. The implementation of Women and Health Module

The pilot study of Turkish Population Survey making use of dual records method will take place in 2001. The design of the study in general and questionnaire for the main module is not complete for the time being. Women and Health Module has set out to be designed in compliance with the principles of main study. Main module of the Turkish Population Survey aims to collect data on birth, death and migration of household members. General health status and diseases are also considered to be covered under the main module. Women and Health Module is intended to be applied on women aged 15 years and over and aims to attain information on issues which are not reached through main module.

In the design of questions related with women's health, questions concerning women's status in general are contained in the module, for they have important effect on women's health. The main themes under Women and Health Module are:

- general information on women such as (1) age; (2) place of settlement in childhood; (3) employment status and health insurance coverage of women's mother and father; (4) blood relationship between mother and father; (5) behavioral characteristics of mother and father as perceived by women; (6) educational attainment;
- the beginning, termination and number of marriages;
- fertility practices;
- health problems associated with reproductive life;
- general information pertaining to child(ren);
- decision making process in family;
- level of responsibility sharing at household level;
- degree of women's freedom of movement;
- presence and degree of violence against women;
- labour force participation, social security, presence and type of health insurance and source of health insurance (persons through whom women get insurance);
- the decision regarding the use of health services, the institution for getting medical assistance and attitude of health personnel;
- general health, chronic diseases and inquiry with regard to menopause;
- mental health.

Implementation of the module will enable to assess coverage of women by health insurance, the source of insurance. Moreover, a considerable insight into the conditions for utilizing health services, institutions which women use to get medical assistance and into the manner health personnel adopts towards female patients will be attained. Survey results will also shed light upon issues concerning reproductive health which is not investigated in detail before such as physical as well as mental illness experienced by women through and after their pregnancies, the termination of pregnancy (with live birth, still birth, miscarriage), menopause and illness connected with it. General health and chronic diseases will also be inquired with a different perspective. Limits on physical movement, the degree of stress, chronic physical and mental diseases, use of medicine and early elderliness ${ }^{3}$ will be explored for the establishment of relationship between women's physical and mental well-being and educational, social, cultural characteristics in advance.

## 7. Conclusion

The decision towards implementation of dual records method by using a gender sensitive approach is an important step for the overall improvement in vital registration. In the context of Women and Health Module, attainment of a complete picture of women's status is aimed.

The module will enable:

- determination of persons covered by health insurance through "third persons" who are not entitled to be covered by health insurance on their own right;
- understanding of structural, social, cultural, educational barriers in front of women which prevent them from accessing available health services;
- evaluation for women's level of mobility and independence in deciding on their personal concerns;

[^40]- gaining insight into biological as well as mental differences between women and men and creating awareness for differentiation of needs in health services between women and men.

After determination of persons through whom other persons are insured, feedback regarding characteristics of persons (a) having health insurance in their own right and having dependants as user of the same right, (b) having health insurance through other persons' health insurance will be attained. Use of the information will facilitate the establishment of persons' overall profile with reference to presence and source of health insurance.

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# WOMEN'S HEALTH IN NORWAY: <br> A CASE STUDY OF A POLICY DRIVEN AGENDA 

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#### Abstract

In this paper we try to present some policy issues that relate to women's health from a public health perspective. The entry point is lessons we learned from working on a recent government report on women's health in Norvay (Department of Health and Social Affairs, 1999), and policy issues developed in this process. Some of these issues are indeed of a general nature, pertaining to women all over the world. Most aspects of women's living conditions relate to their health and use of available health care. Women in general differ from men regarding access to and use of health care, disease patterns and use of welfare schemes. Both biomedical and social gender differences contribute to these differences. The main message is that even if a gender equity framework is assumed and applied in a country, there are still vast inequities between men and women. Aims and efforts to reduce gender inequities should be assessed and included in all future policy making regarding health. Women's bealth is not only a reproductive bealth concern, but has to meet the needs of very diverse women in different ages, etbnic subgroups, and social strata.


Keywords: Women's health policy, Health care for women, Government involvement, Gender equity in bealth, Norwegian Health Plans.


#### Abstract

Résumé

L'auteur expose quelques problèmes d'ordre politique liés à la santé des femmes dans une perspective de santé publique. Elle prend pour point de départ les lesons qu'elle a tirées de sa contribution à un récent rapport gouvernemental sur la santé des femmes en Norvège (Ministère de la santé et des affaires sociales, 1999) et les questions de nature politique qui ont surgi à cette occasion. Il est vrai que certaines de ces questions sont trè̀s générales et concernent toutes les femmes à travers le monde. La plupart des composantes du cadre de vie des femmes sont liées à leur santé et à l'emploi qu'elles font des services de santé existants. En général, ily a des différences entre bommes et femmes en matière d'accès et de recours aux services de santé, de types de maladies, et d'utilisation des systèmes de sécurité sociale. Ces différences entre sexes sont à la fois d'origine biomédicale et sociale. Le message central est que, même si un système d'égalité des sexes est adopté et mis en cuure dans un pays, de grandes inégalités entre hommes et femmes subsistent. Il faut configurer et introduire dans tout projet de politique touchant à la santé des objectifs et des mesures destinés à réduire les inégalités entre les sexes. La santé des femmes ne se limite pas à la santé de la reproduction; il s'agit de satisfaire les besoins de femmes qui se trouvent dans des situations très diverses en termes d'âge, d'appartenance etbrique et de catégorie sociale.


Mots-clés : Politique de santé féminine, Soins de santé féminine, Action gouvernementale, Égalité des sexes en matière de santé, Planification de la santé, Norvège.

## 1. Introduction

Many organisations working on health issues pay attention to women's health. There are women's health programs in the World Health Organisation, other UN agencies and the World Bank address the issue, and there are women's health NGOs and advocates in many countries. But so far, gender issues in health with a women's health entry point, have not become part of the mainstream policymaking. In this paper I will illustrate some core policy issues through a case report from my own country.

The need for a separate women's health issue was indeed acknowledged when the government of Norway, by the Ministry of Health and Social Affairs, in 1997, appointed a committee whose task
it was to produce an official or public report on the status of women's health in Norway. They realised that the issue had to be lifted to the forefront of public attention through a separate activity. The committee producing the report was headed by myself, and also consisted of another seven members: politicians, health professionals, social security administrators, and gender equality experts. The mandate was broad, and covered issues of women's diseases, living conditions, health care, social security, participation, ageing, use of health care, mental health, and also differences between groups of women. The more than 500page report was submitted to the Minister of Health in January 1999 (Department of Health and Social Affairs, 1999).

It is important to have a very broad understanding of what encompasses women's health. There seems to be a clear distinction between a biological or bio-social approach to gender differences in illness, and the social approach to women's health issues that is currently more widely applied. Nevertheless, both biological and social gender differences apply both to a variety of diseases, and to the broad concept of health. The biomedical models to understanding women's health have been accused of being too deterministic, and to focus mainly on the reproductive function of the female body. Of course one of the main biological as well as social determinants in women's lives is their ability to become pregnant and bear children, an ability still exclusive to women. But this is not the only matter of concern for women's health. In biomedicine, it is now well known that there are some disease entities that are more frequent in women than in men, take a different natural course, have a different prognosis, different age of onset or have different risk factors. Other diseases, however, show no major gender disparity. Therefore, a detailed discussion of women's health cannot be completely separated from a review of the different diseases and their gender implications (Schei et al., 1993). A lot of health care is very specialized and tries to handle or cure very specific ailments, and these approaches also need to become gendered.

There are two trends in the ongoing debate on women's health. The first trend is to discuss women's health as a separate political agenda, and to focus only on issues that are specific to women, and not always of relevance to the general debates on health. The other trend is to use a gender framework, and thus to emphasize the comparative aspect of women's health, using the male as a comparison, and sometimes demonstrating that male perspectives are also the normative
ones. The biological model often uses a $70-\mathrm{kg}$. male as the prototype of a human body, and handles deviations from this normative body as specific cases (i.e. children or women). Thus, anything that strikes men more than women (like cardiovascular disease or road traffic accidents) become neutral events, while problems that affect women (like anxiety disorders or osteoporosis) become gendered.

But gender is also identity, cultural symbols and structure. It is therefore important to demonstrate how all of these dimensions of gender increase the understanding of women's health and of how medical science, health systems and care units and welfare schemes meet female patients as users of their services.

## 2. A methodological approach based upon consensus

For women, user perspectives may be important, as less women than men have seats in formal decision making bodies. In producing a women's health policy, it may be of core importance to have several consultations with members of various women's groups, health lobbyist groups, patient groups, experts and researchers. In Norway, we also organized a lay-people's conference around one issue, namely chronic musculo-skeletal disorders in women. The aim of this broad process is to illicit issues of relevance for most women, as well as for different groups of women. Our mandate also asked us to create concrete and prioritized arguments for investments or changes that can improve women's health and living conditions. As is common in political processes in Norway, our document had afterwards to go through an extensive hearing process. Some of the organizations that gave inputs were also on the hearing list. Many of the commission's members were in addition asked to give presentations to a variety of organizations during the hearing process. The end result of the process is still open, but several of the recommendations have already been implemented by various government agencies.

To illustrate and document as many aspects of women's health as possible, it is important to make it an interdisciplinary effort. Thus experts in demography, women's health, disease management, health care or sociology/anthropology may be asked to submit core texts on issues of relevance to a broad understanding of women's health. In our case, an expert panel was appointed, and the texts were revised by the secre-
tariat and the committee jointly, until an agreed upon structure and content was secured. The full document (in Norwegian language) is available on the Internet (http://www.odin.dep.no/nou/1999-13/), and a short summary is also printed in English (Department of Health and Social Affairs, 1999).

## 3. Points of entry into women's health

Our point of entry was that in general, women's health in most parts of Europe is good. On average, women in Europe and other industrialized parts of the world expect long lives, longer than that of their male counterparts. Even in most developing countries, men live shorter than women. Because of this, many women seem to live as elderly citizens with some disabilities or diseases that are not life threatening, but reduce the quality of life and demand health care attention. Women are health care consumers, especially in primary care, more than men are, and elderly women are sometimes seen as a "burden" for care services. As a comment to this, the response we got from lay women is that care providers often do not take women's complaints seriously. So even if a relative longevity is a fact, the burden of disease, the living conditions of elderly women, and their health care needs demand attention.

Another point of entry was a cohort and fertility perspective. While a large proportion of women in all cohorts in Norway and other European countries have been employed wage earners, the majority of those women who are now near pension age entered the workforce only after their completion of childbirth and child care. Thus they have fairly short work careers, and have earned substantially fewer pension points than their male age-mates (Skrede, 1999).

For the 1950 and 1960 cohorts and onward, as in other similar countries, there has been a steady increase in the median age of first births in Norway, and the fertility is now very low (TFR 1.7-1.9). The current generation of mothers or mothers to be have completed an increasingly longer education and started working even before the birth of their first child, and seem to struggle to keep their attachment with the workforce at the same time as they pay a lot of attention to the role of motherhood. The outcomes of maternity are good. Maternal mortality has virtually been eliminated, and infant mortality, which was just
over 150 per 1000 births around 1860, is now almost the lowest in the world. Perinatal mortality is equally low. Norway and the other Scandinavian countries have, as opposed to some similar countries like the U.K. and U.S.A., almost eliminated teenage childbirth. The reasons for this are not fully understood. Good contraceptive coverage, high employment rates, long educational attainments for girls, and widely distributed sex education are contributing factors. Most of the pregnancies that occur in teenagers end in induced abortions. Norway, Sweden and Denmark grant legal access to abortions before 12 (16 in Sweden) weeks of pregnancy. Most of the births and abortions in Norway, however, are in the 20-29 year age group. Some $98 \%$ give birth in institutions with maternity services, and of those who don't, most of them are accidental transport deliveries, due to long distances (Medical Birth Registry of Norway, 1997).

In Scandinavia, antenatal care and maternity care have been and remain free of charge, and almost always delivered as part of the government health service. There are some 60,000 babies born in Norway each year, around half of them to mothers who are married, and $40 \%$ to mothers who live with a partner. Only around $10 \%$ are truly single. These shifts away from formal to more individualized unions have caused some turmoil in standard setting for childcare, social security and other social services that take into account women's social positions. On the other hand, the stillbirth and infant mortality rates do show a social gradient as well, and are slightly higher for young, uneducated single mothers (Arntzen, 1996). Infertility is low, about 3-4\% end their reproductive career involuntarily without children, and half of those eventually adopt (Sundby, 1994). Contraceptive prevalence rates are high, and while young women use the oral contraceptive and to some extent the condom, the Intrauterine Device and surgical sterilization are common in women past 35 years of age.

## 4. Motherhood - and recent social reforms

The importance placed on responsible parent- and motherhood has already lead to several social reforms. These reforms vary somewhat within Europe, even within Scandinavia, but in general the trend goes towards longer maternity leave and better protection of the work environment of pregnant women. Norway enjoys good and well struc-
tured maternal as well as paternal benefits. The mother is entitled to a restructuring of her workday if the pregnancy makes it difficult to work as usual, and if this is impossible, she is entitled to "pregnancy money" which is supposed to be a compensation for lost earnings due to problems at the workplace. Very few use this opportunity, and we experience that more than $50 \%$ of the pregnant women actually are on medically certified sick leave during pregnancy. This has to be justified as a disease that is added on to the pregnancy state in itself. Thus unspecific diagnoses like "girdle instability" or pelvic pain are the most common diagnoses used. The central issue here is the relative balance between two norms. The first one is a workforce gender equality norm that pays no attention to the biological changes that occur in the female body during stages of pregnancy, and claims that a pregnant woman should have no special protection. The second is a more biol-ogy-based norm that may eventually claim that men and women are fundamentally different, and that women should have an inferior role in the workplace because of their (more vulnerable, pregnancy-ridden) body and their reproductive role (Schei et al., 1993).

For the last three weeks of the pregnancy, a woman is entitled to take leave by use of her maternity leave period. In addition to these weeks, the woman has the exclusive right to a two-three month maternity leave after childbirth. The entire maternity leave is either 12 months with reduced salary or somewhat less ( 10 months) with full pay. Unique to Norway is the fact that the father of the child has the exclusive right to four weeks of leave at any time during the child's first year of life - as paid leave. All mothers make use of their rights, and some $80 \%$ of the fathers. Most often it is the woman who takes long leave, but there is an increasing proportion of young fathers that take their share. Breastfeeding is very popular among Norwegian women, and a large proportion continue to breastfeed as a supplement into the second year of life; and then they are entitled to an hour off work daily.

Most women do go back to work after one year, and public and private child care has become fairly accessible. However, the dual/ triple role of motherhood, partnership and employee seems to increase levels of stress in mothers of small children. For a fraction of the mothers, especially from members of the workforce with less education and more routine types of jobs, part time jobs, use of periods of sick leave, and even the new state compensation of a sum of money paid to parents of children between one and two years of age seem to
be factors that make young women somewhat less tied up with the work force. There has also been an increasing number of young women who are on lengthy sick leave or even disability pension for psychiatric conditions, namely anxiety disorders and depressions. One study indicates that $2 / 3$ of the prescribed psychotropic drugs in the Norwegian market are consumed by women (Mouland et al., 1998).

On the other hand, the legal restrictions toward alternative maternal roles like assisted reproduction or adoption have a different view on motherhood. Until recently, adoption has been restricted to married couples where the mother is not past 45 years of age, and Norway has the most restrictive legal framework for artificial fertilization in the world. The normative and religious influences toward a traditional motherhood are obvious (Bioteknologinemda, 1999). These issues are still debated heavily.

## 5. Women are not equal to one another

In some respects, women live rather different lives from men in modern societies. On the other hand, there are great variations between women. Socioeconomic status seems to predict life expectancy for both women and men (Rognerud and Stensrud, 1997). In the capital Oslo, people living in the affluent West end have a much higher life expectancy than people living in the more average East end or the even poorer inner city. Women in East end and men in West end have approximately the same life expectancy. We see the same socioeconomic pattern in the abortion rates. In those municipalities within the city where average income is low, the abortion rates are higher than in the more affluent parts. Even if it is difficult to classify the woman's social status according to her own income, because she will also be classified according to the total family income if she is married, on a more aggregate level there are vast differences also between groups of women.

One challenge in dealing with health issues for women in Norway, is the fact that women smoke more than before; now both $33 \%$ of men and women are daily smokers (Engeland, 1996). As a result of this, we have had a $500 \%$ increase in lung cancer rates for women. Women also smoke during pregnancy, even if they reduce the number of cigarettes smoked. Women of all social strata smoke, but smoking is higher and smoking cessation during pregnancy seems to be even more
difficult among women from lower social classes. In Norway, the percentage of pregnant women who smoke is among the highest in the world. Women in Norway who smoke have a 3-4 times higher likelihood of mortality from stroke than non-smokers. The trend is alarming, more young women than men seem to take up smoking before age 18. Low self esteem, social pressure and a need for revolt and protest seem to be associated with early debut as a smoker (Hafstad, 1997).

Another issue that is of concern, is how women's participation in the work force influence their health in general. One Norwegian study shows a positive relationship between important goals for health and participation in marriage, motherhood and employment (Elstad, 1996). Married women with children and a full-time job have the fewest measurable or self reported health problems. There are some exemptions. For most women paid work is a good thing; for some the workplace is detrimental to health. For example, women who work in routine low pay jobs in care giving in the public sector, seem to suffer from more long-term diseases in the joints, bones and muscles. They also suffer from stress and psychological problems related to their jobs. For many, having a family is beneficial to health; for some, where sexual violence or abuse is involved, marriage is a direct hazard to health. There is no difference in the mental and physical health for the children of working or non-working women.

## 6. Femininity - healthy or dangerous

The Norwegian woman is internationally often pictured as very modern, very independent and maybe somewhat less traditionally feminine than the rest of their European sisters. Norway has a very cold climate, and for this reason, it may sometimes be difficult for Norwegian women to dress up in a typical modern way. Norwegian women seem to trade off media made feminine norms against a more functional one. If a woman's workday is going to contain getting up in the dark, to rush yourself and two children to the kindergarten by public bus; when it is snowing heavily and the temperature is minus six degrees, the best way to dress is in long under-pants, jeans, a parka and boots with a rubber sole. The workplace dress code is pretty tolerant to this. But nevertheless, the international norms for dress codes for women do reach the Norwegian consumers, too, and many girls com-
promise between risking to catch a cold and wanting to wear thin stockings and high-heeled shoes.

This leads on to a discussion of what aspects of the codes for femininity are potentially good and what is potentially bad for health in different arenas in women's lives. Norwegian girls are, as in other countries, taught to be attentive and caring towards other people and to understand themselves in relation to other people. Health benefits can be found in good close relationships and networks. Women respond more often than men that they have intimate friends other than their spouse to share emotional problems with. Women also more often than men seem to seek care for minor psychiatric problems at an early stage, thus accessing help before the problems get to be overwhelming. Beauty and aesthetics are important projects for many women. Women are great consumers of all kinds of beauty products, also in the new health care arena of plastic body shaping surgery, nutrition supplementation, diets and skin cosmetics. The health benefits lie inherent in caring for oneself and looking after one's appearance. The negative side effects are a preoccupation with appearance, unhealthy dieting, eating disorders like anorexia and overeating disorders, low self esteem or exposure to dangerous medical practices like extensive removal of fatty tissue, implant surgery, over-consumption of drugs that regulate bowel movements, diuretics or nerve pills. There has been an increase in the number of young women who suffer from bulimic or anorexic eating disorders also in Norway, and researchers view this, more than anything else, as diseases in the crossroad between modern culture and exaggerated femininity conflicts (Skårderud, 1999).

Women increasingly suffer from chronic diseases like osteoporosis in older ages, and as a result of that and a few other environmental problems in Norway that we do not fully understand, there is an epidemic of hip bone fractures and forearm fractures in the Norwegian female population. Regular exercise as well as diet are important prevention measures for this, but the medical society is also concerned about prevention through partly subsidized hormonal drugs. Young women in Norway often participate in sports, but often in less competitive sports than men, and often they quit earlier. On the other hand it seems as if women more than men enjoy skiing, hiking or tour walking. Exercise is also important for the prevention of cardiovascular diseases and late onset diabetes due to overweight, both of which are quite prevalent in Norway. Young women often complain that they
find no time for exercise for themselves when they are in the workforce and have small children at the same time.

## 7. Many women's lives - different health conditions

It is demonstrated internationally that single mothers who have given birth at a young age, who have a shorter than average education, weak ties with the labour market and little contact with the child's father, are in particular danger of finding themselves in financial trouble, of being disregarded for a long time by the labour market and wearing themselves out because they have been left alone with caring responsibilities. Many of them feel a distaste at being dependent on benefits from the social welfare office. This kind of situation entails a health risk for both mother and children. Women living in informal unions seem to have somewhat less stable relationships than those who are formally married, but living together and having children may also lead into marriage at a later stage. While living together was a way of organizing the family only for an educated elite some two centuries ago, it has now entered all classes of society. This may imply anything from just sharing small apartment for a short time to lengthy marriage-like contracts involving the purchase of a house, a vehicle and family ties. The state has had to revise its marriage and property ownership laws to protect women and children in these types of unions. Another public report was just submitted to the government regarding new patterns of living together and policy implications (Department of Family Affairs, 1999).

In Norway, a woman's right to make decisions concerning her own body is a major, guiding principle. Her exclusive right to make decisions regarding abortion in the first trimester of pregnancy, and the state's limited right to take any action against a pregnant woman is underlying these principles. The legal age for sexual intercourse is age 16, but a sexually active girl under that age may nevertheless be given contraceptives if she needs it. Norwegian women have easy access to reproductive health information and services, including sex education in schools, and there have been improvements in the enforcement of legal actions against sexual exploitation, incest and rape. The HIV epidemic is very limited in the Norwegian heterosexual population, and other types of sexually transmitted diseases have also got a very limited prevalence. We do test all pregnant women for HIV (voluntary testing)
but very few cases of infection not already known are found. STD control programs are an integral part of all MCH and FP programs, in a "matter of fact" way. The prevalence of syphilis in pregnant women is so low that the compulsory screening may be abandoned. The major concern is a still somewhat high prevalence of chlamydia in young girls.

On the other hand, there are some remaining problems, like inequities in access to basic care and services due to health service infrastructure being difficult to maintain in remote areas, and a lack of political willingness to open up for issues like easy access to emergency contraception, medical abortion or sex education in some local communities. There is a lively debate going on about these matters, especially because it is an imperative to reduce the number of unwanted pregnancies and abortions.

## 8. Diseases

In order to carefully review the impact of disease on women's health, there is a need to give particular importance to diseases that almost exclusively affect women, or affect women more often or earlier than men. Diseases that affect both sexes, but where the prevalence, course, outcome or consequences are different for men and women and the diseases that statistically affect many women, although they also affect many men, are also important to account for. But for policy makers, it is often the conditions which society regards as problematic that receive public attention and are gendered. Research into illness in women has to make room for newer understanding of women's biology and at the same time integrate to a greater extent knowledge about women as individuals in society. As long as a lot of the disease statistics are not broken down on men and women separately, a lot of information is lost (Halsteinli, 1997). In Norway, we are concerned with violent people with psychiatric diseases. Almost all of those are men, but this is not addressed in the statistical review of number of assaults done by these patients. Another issue is the gender perspective of health service facilities and their use. Why are so many encounters between women and the health service described as problematic? What is needed before women regard services and meeting their needs in a good way?

Women's more frequent contact with the health service applies in the first instance to consultations with general practitioners, in old people's homes and rehabilitation institutions. If we look at consultations in hospitals' out-patient departments, the gender difference is almost eliminated and the same applies to admission to hospital, if we exclude admission due to childbirth and pregnancy. Most women have few visits to the doctor each year, while a small minority have many. This small group of women (5-8 per cent), who have ten or more contacts with the doctor each year, excluding those who go for antenatal care services, suffer from problems that are difficult to diagnose accurately, and thus hard to help. This group may also include women with chronic diseases who need close, special monitoring (Kalseth et al., 1997).

Many of the chronic and complex ailments that groups of women suffer from have a low status in the hierarchy of diseases. This applies to musculo-skeletal disorders, mental disorders and geriatric complaints. Some vague complaints and chronic pain syndromes are difficult for the health service to offer good care for (Malterud, 1990). Typically, these disease groups have - low prestige within the medical community; - poorly developed and badly integrated research-based knowledge; - too little expertise among general practitioners - with subsequent inadequate uncovering of the problem, help and referral; - communication with and interpretation of the women characterized by poorly founded presentations and prejudices; - conflict in relation to the traditional ideal that the doctor will "sort things out": make a diagnosis and prescribe treatment;

- inability to understand complaints in the light of the individual woman's life situation, resources and ability to cope;
- too little capacity and expertise in the specialist health services.


## 9. Women and welfare

The intention of most welfare policies, including the Norwegian National Insurance Act, is to provide security against a major loss of income or major expenses incurred through illness. Through the social security and welfare schemes, a distribution of different resources are handled. In Norway, we have a general health insurance that covers all individuals living in the country, and the payment is directly deducted
from the wages of the wage-earners, while self employed people pay according to other schemes. Even non-working citizens are provided for, but receive less benefit, as one is entitled to a certain fraction of the earned salary as a basic benefit. The systems also offers benefits for pregnant mothers and caretakers of newborn babies. Most of the schemes are described as formally gender neutral programs. The basic requirement of being employed means that working women have the same possibilities as men to earn rights, but no consideration is given to the fact that women's and men's participation in the workforce is not equal. Women work more part-time than men, and women usually have a shorter total time in the work force before retirement (Brage, 1998).

Social security benefits were originally introduced to give men compensation for loss of income resulting from unemployment, illness, disability, occupational injury, etc. When women entered the workforce, they were still first and foremost seen as secondary supplementary family income earners. The first benefits that were brought in for women were based on loss of support and provided compensation for loss of a family supporter or for lack of support. Now women's ties to the family are more varied. Many divorced men who are legally supposed to pay child care maintenance fail to do this. The mother will then receive a sum from the government to help her support the children. Many men and women live together in less stable unions; the number of households with one adult has grown, and adult women are less dependent on men as family supporters. The benefit schemes are intended to motivate people to work. It seems as work motivation, or ties to the workforce, are different for women and men. Women score higher on short term and long term sick leave as well as on disability pensions. On the other hand, given their lower levels of income, they are cheaper to keep on benefits, as they seldom reach the higher level of benefit payments. The goal of high employment also includes people who are poorly qualified to meet the competition on the labour market. The challenge is to provide social security benefits that serve as safety nets for people who lose their income from employment, but they must be designed to ensure that employment is the first choice.

However, women who have few ties with the workplace and a low education may be more difficult to return to or retrain for employment. In the second place, all jobs will not necessarily lead to selfrespect, integration and financial independence. Many female workplaces especially in the public care services and in ware trade, pay
badly, have poor working conditions and little right of selfdetermination. The fact that a number of women have had their claims for a disability pension refused and have been referred to the social welfare office or private support shows that the work approach does not work as intended. They have not returned to work and they have not been granted social security. If the work approach is to succeed, these women must be given a concrete offer of training, qualifying or suitable work. If such work is not available and there are no opportunities for them, then social security must be an alternative for them as it is for other people (Malterud and Hollnagel, 1997).

Social security rights depend on the definition of the term disease in the regulations and in social security service practice. The national insurance scheme's concept of disease is based on a medical science and practice based formulation. Specific requirements are often made of the illness with regard to diagnosis, type of symptoms or consequences. When women's illnesses are given less priority than typical men's illnesses, this may be reflected in who is entitled to social security benefits and the understanding one is met with in the social security system. So far, more women seek disability pension than men, and at an earlier age. On the other hand, a higher proportion of women's applications are turned down. We do not really know what happens to these women in the long run.

## 10. Recommendations

Different women's health reports contain a series of different recommendations. One global recommendation is of course to increase the knowledge base on the relationships between women's lives and women's health, and to gain more knowledge about women's diseases. We do emphasize that this does not come automatically from mainstream research centers, but may have to get special legal and grant frameworks as is also recommended in other countries (Haseltine et al., 1999). In some institutions, like major teaching units, it may be important to set up women's health chairs or units, and to earmark grant money to women's health research. Of core importance is also a reshaping of health services to better meet the needs of female clients, and emphasize the need for multi-specialist centers for some of the main problems that affect women (Doyal, 1998), and to put a better
gendered understanding of central care issues into plans and treatment strategies for mental health services. We also reinforce that all health statistics should be broken down to separate reporting for men and women. Finally it may be relevant to request all levels of health care management to review various methodologies for involving women users in health care decision making, both in individual cases and in larger policy issues.

An example of this is a project launched by Norwegian board of health, which together with the National Research Council organized a lay women's conference and an expert conference on maternity services in Norway in late 1999. The two conferences events challenged the mainstream expert recommendation that maternity services, for the sake of perinatal survival, should be even more centralized. While experts were mainly concerned with minor gains in perinatal mortality figures, the laywomen mentioned two types of needed safety. They wanted biomedical safety in the background, in case it was needed. They also requested another, more human safety measure that has to do with being seen and treated as an autonomous woman even when in labor pain with an increased risk of dangerous outcome for the baby. Sometimes these two types of concerns are in conflict, but the women's solution would not always be the more centralized one if that would imply not being treated as a patient in her own right (National Research Council and Norwegian Board of Health, 2000). Other organizations have also launched different methods for assessing women's and users' perspectives on health issues. The best documented effort is the gender advisory panel that gives advice to the Reproductive Health Research Program (HRP) in the World Health Organization. This is a body that reviews research policy and priority within a large, multilateral research organization (Hardon and Hayes, 1997). The way they have been able to influence decision making is a nice illustration to the point that if some women's voices are listened to seriously, things may change for the better for many women.

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# CHARTING A COURSE FOR THE FUTURE OF WOMEN'S HEALTH IN THE UNITED STATES: CONCEPTS, FINDINGS AND RECOMMENDATIONS* 

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#### Abstract

The JHU Women's and Cbildren's Health Policy Center, with the federal Maternal and Cbild Health Bureau, undertook, a revien of the bealth of women in the United States and invited experts to develop recommendations on bealth policy, programs, practices and research. The review included published research, program reviens, and policy reports on women's physical bealth, mental health, and health behaviors, and on the effects of health services, systems and financing on their health. Based on trends in age, etbnic background, education, labor-force participation, marriage and childbearing among women, the results of the reviews, and the experts' consultation, several recommendations were made for a forvard looking agenda. They included the need: 1) to focus broadly on women's health, not just during pregnancy; 2) for comprebensive, inte-


[^41]grated programs and services addressing women's unique needs; 3) for integrated programs and services across the lifespan; 4) for better provider training about women's unique bealth needs, the differential effects of particular problems on them, and the consequences of chronic health problems heretofore considered primarily male problems; 5) to eliminate social policies that single out women, particularly pregnant women, for punitive actions; 6) to promote social policies that ensure economic security for women; and 7) for vigorous public health leadership to shape the women's health agenda, recognizing the social and economic context of their lives. The social and economic trends among women in the United States and the recommendations for a women's health agenda have relevance to other developed countries as well.

Keywords: Women's health, Health policy, United States, Social and economic trends, Multiple roles, Lifespan.

## Résumé

Le JHU W omen's and Cbildren Health Policy Center et le Federal Maternal and Child Health Bureau ont procédé à un état des lieux de la santé des femmes aux États-Unis et ont invité des experts à formuler des recommandations sur la politique, les programmes d'action, les pratiques et la recherche en matière de santé. Cet inventaire couvre les recherches publiées, les évaluations de programmes et les rapports politiques sur la santéphysique et mentale des femmes, sur leurs comportements à cet égard, et sur le rôle des services de santé et de l'organisation et du financement de ce secteur. À partir des tendances observées chez les femmes en fonction de l'agge, de l'origine ethnique, du niveau d'instruction, de l'activité économique, de la nuptialité et de la fécondité, fournies par l'inventaire et par les consultations d'experts, les auteurs présentent plusieurs recommandations sous la forme d'un programme d'action pour l'avenir. Elles portent sur: 1) la nécessité de s'intéresser à la santé féminine dans son entièreté, et non aux seules périodes de grossesse ; 2) la nécessité de mettre en cuvre des programmes et services polyvalents et intégrés pour faire face aux besoins spécifiques des femmes; 3) la nécessité de prévoir des programmes et services intégrés pour tous les âges de la vie ; 4) la nécessité d'une meilleure formation des agents en ce qui concerne les spécificités de la santé féminine, les effets différentiels de certains problèmes particuliers et les conséquences de certaines maladies chroniques considérées jusqu'à présent comme des problèmes essentiellement masculins ; 5) la nécessité d'en finir avec les politiques sociales qui stigmatisent les femmes, en particulier les femmes enceintes, pour les pénaliser ; 6) la nécessité d'encourager les politiques sociales qui garantissent une bonne sécurité économique aux femmes; 7) et la nécessité de fonder les programmes d'action en matière de santé féminine sur un ensemble de principes d'orientation énergiques, en tenant compte du contexte
> social et économique dans lequel vivent les femmes. L'évolution de la situation sociale et économique des femmes aux États-Unis et les recommandations pour un programme d'action en matière de santé féminine peuvent s'appliquer aussi à d'autres pays développés.

Mots-clés : Santé des femmes, Politique de santé, États-Unis, Tendances économiques et sociales, Rôles multiples, Durée de vie.

## 1. Introduction

The turn of the century offers an opportunity to assess the current state of the field of women's health in the United States and to make plans for the next century. As in other developed countries (Hayashi, 2000; Sundby, this volume), women's health has seen many changes during the century, particularly in the past thirty years, reflecting social, cultural and economic transitions in the lives of women. Recent trends in the social and economic status of women, especially their educational attainment, employment status, and choices about reproduction and family composition point to an increasingly complex social context influencing their health.

The dramatic changes in the lives of women in the United States - at home and at work - challenge the health field to expand its understanding of the meaning of women's health. Moreover, the philosophy of health care for women has evolved from a reproduction-centered medical model to one that increasingly describes women's health in terms of the totality of their experiences across the life span, including their expanded social and economic roles and the influence of culture, psychology, and social factors - in other words, a biopsychosocial model of women's health. This view goes beyond recognizing biological differences to consider gender-based social and economic inequities that affect health. It also recognizes that health is more than the absence of disease or disability; it is the maintenance of psychological and social well-being as well as physical health. In this view, gender becomes a key variable in understanding social and medical forces that affect women's health, including their social roles, economic status, access to health resources, experiences of health and illness, and interactions with the health care system.

In the last ten years, the field of women's health has been confronted by a host of new challenges and opportunities in the United States: a rapidly changing health care delivery system driven by cost containment and reduced public health expenditures; social welfare policy reforms that profoundly alter the lives of poor women and their children; continuing trends toward devolving responsibility for health and social programs from the federal government to states and from states to communities; and a resurgence of women's activism that has changed health and research priorities and policies. With these changes in perspective, this paper addresses the social and economic context of the lives of women, and its implications for policies, practices and programs related to women's health in the United States and in other developed countries, where appropriate.

The Women's and Children's Health Policy Center (WCHPC) at the Johns Hopkins University School of Public Health, in collaboration with the federal Maternal and Child Health Bureau (MCHB), undertook a review of the current state of women's and perinatal health in the United States and invited experts to help develop recommendations for a forward looking agenda (Grason et al., 1999). The results of this review and a meeting of experts in women's and perinatal health form the basis for this paper. A key contribution of the initiative, referred to here as Charting a Course for Women's Health, lies in its public health orientation, one that seeks to address population health in the context of social, environmental, and behavioral factors.

In Charting a Course for Women's Health, two major questions were addressed: 1) in the next decade, how should the field of women's and perinatal health respond to emerging concerns resulting from shifts in the political, social and cultural landscape for women in the United States; and 2) how can the health of women be guaranteed. The WCHPC assessment of these questions included a comprehensive review of published research, program reviews and policy reports concerning women's physical health, mental health, and health behaviors and the effects of health services, systems, structures, organization and financing on women's health (Grason et al., 1999, vol. II). The review topics for this assessment were selected based on: their timeliness in terms of current policy debates about women's health in the United States; amenability to intervention by public health; relevance to both women's and perinatal health; and amount of information available on the topic; topics for which considerable information was already available in the literature, such as
chronic illnesses and cancer, were either not reviewed or only briefly reviewed. Literature specific to the health of the mother during pregnancy and her newborn was incorporated within the broader context of women's health during the childbearing years.

For the purposes of the review of the literature, the definition at the Fourth World Conference on Women in Beijing was used as a starting point and was further refined based on the work of Weisman (1997) to include three basic features: 1) consideration of health as a product of cultural, social and psychological factors as well as biology; 2) viewing women's health from a life-span and multi-role perspective; and 3) recognition that extension of the concept of health beyond the absence of disease requires health promotion and health maintenance strategies by the individual, the health community, and society.

At a working meeting sponsored by MCHB and WCHPC, women's and perinatal health professionals, policy makers and advocates identified the most pressing health concerns for women of reproductive age. Drawing upon the reviews of the literature, meeting participants identified changes that need to be made in health policy, services and systems in order to ensure continuous improvement in women's health. Following the meeting, additional feedback was obtained from the experts about recommended changes with regard to six areas related to women's health: social policies; surveillance and quality assurance; service availability, coordination, and organization; financing of health programs and services; health communication and education services; and development of workforce competency and capacity.

## 2. Demographic and socioeconomic trends for American women

Familiarity with recent social and demographic trends that affect women is essential for understanding the context of women's health in the United States and other developed countries. Social, economic, and political forces shape women's health by influencing trends in population characteristics, education and employment of women, reproduction, family composition and household economic status. Six major social and economic changes, important to understanding women's health in the United States today and in the future, are: aging of the female population; increased ethnic and racial diversity of the population; increasing labor force participation of women, particularly among women with children;
delay in marriage and childbearing of women; a rise in female-headed single parent families; and continued economic disparities between men and women and racial and ethnic groups. These trends contribute to women's predisposition to chronic diseases, and influence health beliefs and behaviors and access to health care.

The U.S. female population has been and will increasingly be aging over the next fifty years. Since 1950, the number of women aged 65 or older tripled from 6.5 million in 1950 to over 20 million in 1998 (Day, 1995). The United States Bureau of the Census estimates that by July 2020 this number will exceed 29 million and represent close to one-fifth of the total female population. Over 42 million women aged 65 years or older are projected to be living in the U.S. by 2050, accounting for 21 percent of the total female population (Day, 1995). This rise is due primarily to the aging of the baby-boom population (born between 1946 and 1964), with some contribution from an increase in life expectancy for women.

A result of the aging of the female population is likely to be increasing numbers of women living longer with chronic illness and functional disabilities for which a greater proportion of the health care expenditures in the U.S. will be needed. Moreover, these women will increasingly be without partners due to earlier mortality of men, high divorce rates and rising proportions of women who choose not to marry. Women will have fewer children as well, resulting in less available family support for this aging population (U.S. Bureau of the Census, 1996).

At the same time, the U.S. female population has become and increasingly will be more ethnically diverse, particularly at ages at which women historically have their families. The rate of population growth is greatest for Asians, but the growth in numbers is greatest for Hispanic women, because the U.S. Hispanic population is considerably larger than the Asian population (U.S. Bureau of the Census, 1996). Ten percent of the female population is currently of Hispanic origin, but this figure is estimated to be 16 percent by 2020 and 24 percent by 2050 . The Asian female population is estimated to grow from 4 percent of the population in 1996 to 6 percent in 2020 and close to 9 percent in 2050. NonHispanic white women, who currently account for 73 percent of the female population, are projected to make up 60 percent of the population in 2030 and only 53 percent in 2050 (U.S. Bureau of the Census, 1996).

These changes in ethnic composition have important implications for the health of American women and their access to health care, particularly
with regard to allocation of health care services, outreach services to bring women into care, and cultural training of the health care work force. Financial and other barriers to health care utilization often prevent appropriate use of preventive services, such as mammograms, among minority women (Wyn et al., 1996). Minority women also are at greater risk of a host of chronic and acute illnesses (Geronimus et al., 1991; Geronimus and Bound, 1990; National Center for Health Statistics, 1990). The need for services that are culturally sensitive to the varied ethnic groups in the population will become increasingly important as well.

In the last half of the 20th century, there was a dramatic rise in the labor force participation of women in the United States. In 1950, about 30 percent of women aged 16 or older participated in the formal labor force. This percentage nearly doubled to 57 percent by 1990 and reached 59 percent in 1994 (Wagener et al., 1997). The rise has been particularly marked for women with young children. Less than 40 percent of women with children under six worked in the formal labor force in 1975, whereas 65 percent did so in 1997. The respective figures for employed women with children aged 6-17 were 55 and 78 percent (Maternal and Child Health Bureau, 1998).

One reason for the higher rate of labor force participation of women with children is the variability in the rate among different age cohorts of women. While increases have occurred for all ages of American women, the labor force participation rate is almost double the rate at ages 20-24 for cohorts of women born in 1961-65 as compared with those born in 1926-30 (Figure 1). Moreover, while cohorts born before 1950 showed a drop in participation in their twenties and early thirties when women were caring for young children in their homes, no drop has been noted for more recent cohorts (Institute for Women's Policy Research, 1996). Sundby (this volume) reports that the current generation of Norwegian women started working before the birth of their children and have struggled to stay in the labor force. Japanese data (Hayashi, 2000), however, still show a drop in labor force participation for women of childbearing age, although the drop occurred at later ages in 1995 (at ages 30-34 years) than in 1975 (ages 25-29).

The rise in labor force participation has been accompanied by a rise in educational levels of women and a decrease in the gap between black and white women with regard to completion of secondary education. Although historically black women received less education than white women, the racial gap in high school completion has largely been erased;

89 percent of white women and 87 percent of black women aged 25 or older in 1997 had completed high school education, compared with only 22 percent of white women and less than 10 percent of black women in 1940 (Adams and U.S. Bureau of the Census, 1995). Disparities still exist, however, for Hispanic women for whom only 65 percent aged 25 or older had completed high school education in 1997 (Day and Curry, 1998).

Figure 1
Trends in labor force participation rates for women 1950-95, by birth cohort


Although a gender gap in completion of a college education has historically favored men, this gap actually reversed in recent years; women are now slightly more likely to complete college than men. In 1970, women were only about two-thirds as likely to attain a bachelors degree as men but they were over 10 percent more likely to have attained one than men in 1997 (Day and Curry, 1998). Hayashi (2000) notes that Japanese women's enrollment in college overtook that of men in the late 1980s and Sundby (this volume) reports increases in education completed by Norwegian women. Women in the United States as well as in other developed countries are now more literate than ever before and have greater options to pursue careers and to make choices about marriage and childbearing as well. The higher education of women is likely to lead to greater consciousness about their health as well.

Despite advances in education, increased labor force participation and a faster rate of growth in income than men, gaps in earnings for women persist relative to those for men. In 1998, U.S. women still earned

Figure 2
The female-male wage gap over the life cycle (1998 median annual earnings by age)

only 76 percent of men's median earnings, adjusted for education, and the gap in earnings increases as women age (Figure 2) (Bureau of Labor Statistics, 1999). A similar gap persists in wages between Japanese men and women (Hayashi, 2000). The recent increase in women's earnings in the United States, however, has been attributed to a decline in men's wages, rather than to a rise in women's earnings. A gap also is noted for black women in their earnings relative to white women (Day and Curry, 1998).

Since the 1970s, there has been a decline in first births among women in their twenties, while the number and proportion of first births to U.S. women in their thirties has risen dramatically. The age-specific fertility rate for women $30-34$ years rose from 52.3 births per 1,000 women in 1970 to 87.4 in 1998 (Ventura et al., 2000). For women aged 35-39, the rate in 1998 was 37.4 and has nearly doubled since 1978 (19.0) (Ventura et al., 2000). Moreover, although the number of women having births at 40 or older is not large ( 84,809 in 1998), the fertility rate for this age group has nearly doubled since its low in 1981 (Ventura et al., 2000). A trend in increasing median age at first birth has also occurred in Norway among cohorts born in the 1950s and 1960s (Sundby, this volume).

The rise in the age at first birth is due in part to a rising age at marriage. The median age of marriage for American women rose from 20.8 in 1970 to 24.5 in 1994 (Saluter, 1996). Between 1970 and 1994, the proportion of women aged 30-34 who had not married tripled from 6 to 20 percent and it rose from 5 to 13 percent for women aged 35-39 (Saluter, 1996). Hayashi (2000) reported a similarly large increase in the percentage of unmarried women in Japan aged 25-29 and 30-34 years. At the same time, there has been an increase in the number of women who choose to remain childless. In 1994, there were 5.4 million American women who had no children and expected none in the future. Most of these women (4.1 million) had chosen voluntarily not to have children (Abma et al., 1997).

The delay in childbearing has implications for the health of women during pregnancy. Women who delay childbearing may have limited or later contact with the health care system, yet rates of chronic diseases increase with age as do maternal mortality rates (Atrash et al., 1995; Berg et al., 1996; Geronimus and Bound, 1990). Moreover, with delayed childbearing, women in their thirties and forties are increasingly confronted with having the dual roles of simultaneously caring for young children and elderly parents (Menken, 1985). Women are considerably more likely than men to be caretakers of the terminally ill (72.1 percent in a recent study)
(Emanuel et al., 1999), so that the responsibility for both their children and elderly parents falls disproportionately on their shoulders.

Concomitant with later marriage and childbearing has been a rise in single-parent households, the majority of which are headed by women (Saluter, 1996). This rise is due primarily to rising divorce rates, and secondarily to an increase in childbearing outside of marriage (Saluter, 1996). Although young women are more likely to have a child outside of marriage, the percentage of births to unmarried women has risen for all age groups (Ventura et al., 2000). Black families (47 percent) are considerably more likely than white families ( 14 percent) to be maintained by women without a spouse present (U.S. Bureau of the Census, 1994).

Female-headed households are at a distinct economic disadvantage compared to households with male heads or married couple households. In 1997, the median family income of a female-headed household with children was $\$ 23,040$, compared to $\$ 36,634$ for male-headed households and $\$ 51,681$ for married-couple households (U.S. Bureau of the Census, 1998). The higher incomes of married couple households are due in part to both spouses working outside the home.

The poor economic status of female-headed families means that the women who head these families are likely to experience many of the same stressors related to multiple roles as their higher income counterparts, but have less resources in terms of money and spousal support to address these stressors. This may be one reason for their increased risk of chronic and acute illnesses and their decreased access to needed health services. Indeed, Khlat et al. (2000) note that French women with children at home report poorer perceived health and more symptoms of malaise in the absence of a spouse to provide help and support.

## 3. Policies, programs, and practices for improving women's health

Recognizing the importance of the social and economic context for American women, several broad recommendations for health programs, practices and policies were made by the WCHPC in consultation with experts in the field. Many recommendations are similar to those made by the Commission on Women's Health in Norway, despite the greater benefits provided there for women and families (Sundby, this volume).

## 4. Broadening the focus beyond maternity care

While childbearing is still an important event for the vast majority of women in the United States, focusing primarily on women's health during pregnancy and the childbearing years is far too narrow. Women perform many roles other than mother in their lifetime. These roles affect their health, which, in turn, may influence their ability to successfully fulfill their social roles, including, but not limited to, parenting. Women in the United States today spend on average more time in the work place over their life time than they do parenting dependent children. Given the average number of 2.2 children expected by U.S. women in 1995 (Abma et al., 1997), pregnancy and care of an infant occupy less than ten percent of a woman's adult life.

The narrow focus on pregnancy has rendered a fragmented approach to providing publicly funded insurance coverage to low income women in the United States. Coverage is provided primarily during pregnancy and the postpartum period, but not during the interconception period or after women stop childbearing. This coverage also emphasizes the health of the newborn, and the mother as the biologic vehicle whose health is important to primarily protect the fetus. Many low income women who have stopped childbearing, some because of their age and others by choice, are not covered in the U.S. through publicly funded insurance until they reach an age eligible for Medicare (usually age 62 at the earliest) (Collins et al., 1994). This problem is particularly acute among women of color who are at increased risk in their 30 s , 40 s , and 50 s of chronic illness, particularly hypertension and adult-onset diabetes (Geronimus et al., 1991; National Center for Health Statistics, 1990).

Another constraint related to the historical focus on pregnancy is that assuring the general health of women prior to becoming pregnant is not a priority, despite its important effect on pregnancy outcomes and health in later years. Moreover, there is increasing evidence that preconception care, a form of well woman care that recently has been promoted as a fundamental component of pregnancy care, is important in reducing the risk of poor pregnancy outcomes, particularly those related to birth defects. For example, use of folic acid supplements prior to pregnancy and during the first trimester reduces the risk of neural tube defects (Mills et al., 1996; Smithells et al., 1981; Wald, 1995). Moreover, good glycemic control at the start of pregnancy for women with insulin dependent diabe-
tes reduces the risk of birth defects to levels similar to those for women without diabetes (Jack and Culpepper, 1990).

Evidence suggesting that women are choosing to delay childbearing and to remain voluntarily childless further highlights the need to shift the historic focus primarily on reproductive health to a more comprehensive approach to women's health care needs. This historic focus fails to identify the growing numbers of women who may not enter the health care system for childbearing related services, and whose health may be compromised in later years as a result.

Birn (1999) also recognizes the narrow focus on women's reproductive health historically taken in the International Health arena, particularly with regard to foundation funding of public health programs. A more holistic approach to women's health care must be taken to address the overall needs of women and the integration of services for them, regardless of their reproduction status. Birn argues that a revolutionary change must occur in the social fabric of countries in order to advance the health of men and women alike as well as social, economic and political equity for women.

## 5. Women-centered care: addressing their multiple roles

A second recommendation from Charting a Course is that women need comprehensive, integrated programs and services, including preventive services, that address their unique needs and circumstances. The fragmented nature of the U.S. health care system, unlike most other developed countries, contributes to women's inability to take advantage of the full range of services they need. Women often have multiple providers for pregnancy care, gynecologic health, well woman care, and treatment of chronic health conditions. Mental health services and substance abuse treatment are also often separate from preventive and medical services. The unique health needs of women are not only related to conditions for which they may be at greater risk, such as breast, ovarian and cervical cancer, or for which they experience greater morbidity and mortality, such as alcoholism, but also to the multiple social roles they assume (McDonough et al., this volume).

The most poignant example of the need of the health care system to promote women-centered care that addresses their multiple roles and unique needs involves treatment for alcohol and drug abuse. A major bar-
rier to accessing treatment for women who abuse drugs or alcohol is that relatively few in-patient programs permit children to accompany their mothers in treatment and few out-patient services provide child care while women are in treatment. Success in these programs is linked to a woman's success in fulfilling her roles of mother, wife and in the work place ( $\mathrm{Na}-$ tional Women's Resource Center, 1997). These programs, which have historically treated a largely male population, are not equipped to address these needs. Recommendations for gender-sensitive care include interventions that are family centered, focus on the importance of relationships for women, and address their needs for skills building and enhancement of self-esteem (National Women's Resource Center, 1997). A more integrated approach linking substance abuse treatment with traditional providers of care for women would begin to address some of these barriers.

## 6. Integrated health care across the life span

The third recommendation addresses the need to integrate women's health services and programs across the life span, recognizing that events that occur earlier in a woman's life may have a profound effect on her subsequent health. Health, or lack thereof, builds decade to decade, generation to generation. There is increasing evidence that one's health status at birth and socioeconomic position during the formative years interact to affect a host of health conditions in adulthood (Arber and Cooper, 2000; Langley-Evans and Jackson, 1996). One example of such links is the effect of mother's birth weight on the birth weight of her offspring. These intergenerational effects on birth weight have been hypothesized to be one explanation for the higher rates of poor pregnancy outcomes among black women as compared to white women in the U.S. (Sanderson et al., 1995).

Another example of the need to integrate health programs and services over the life span is the fact that smoking in the United States is a pediatric problem. The vast majority of smokers start between grades 6 and 9 (roughly ages 11 to 15), and few adopt smoking after age 20 (Centers for Disease Control and Prevention, 1996). Yet, the health ramifications of smoking are often recognized for women first with regard to the birth weight of their infants and later in relation to increased risk for conditions such as lung cancer, chronic obstructive pulmonary disease, and heart disease (Kristeller and Johnson, 1997; Scanlon et al., 1995). Preven-
tion of smoking must begin with school age children, as early as elementary school. Another example of early prevention is the use of calcium supplements during adolescence and the early adult years to help prevent osteoporosis, a condition which generally does not occur until at least four decades later (Haines et al., 1992; Heaney, 1991).

As noted above, of particular concern is the lack of health insurance for many low income women in the United States during the time period after they stop childbearing and before they qualify for Medicare. Even if they are employed, many do not have access to health insurance because their employers do not provide coverage for them. For example, they often work part-time or for small companies that can not afford health insurance coverage for employees. This gap in coverage has long-term implications for the health of low income women as well as for the costs of health care, as preventive strategies are often not available for the groups most in need of them. Without adequate health insurance coverage, low income women are less likely than more advantaged women to age in good health.

## 7. Training health professionals about women's needs

A fourth recommendation relates to the need for better training of health care providers about women's health issues, including knowledge about the unique needs of women, the differential effects of particular problems such as alcohol abuse on women, and the consequences on women of certain chronic health problems like heart disease, which heretofore have been considered primarily problems of men. This latter concern is due largely to the exclusion of women from clinical trials of treatment modalities and medications because of fear of the consequences on the fetus among pregnant women (Kingdon, 1995). This lack of knowledge has not only resulted in inadequate attention to the major killers of women, but also to limited screening for illnesses and personal health behaviors. For example, medical residents in training are less likely to screen women for alcohol abuse than they are to screen men (Dawson et al., 1992), despite the particularly deleterious effect of alcohol abuse on women (Allen and Feeney, 1997; Mishra et al., 1989).

A major deficit in education of health care providers has been the limited attention to how the social context of women's lives affects their health. Examples of topics that need to be integrated into the curriculum
of medical schools include the effect of stress related to the multiple roles of women, the importance to women of relationships with their partners and their children, the social and economic circumstances of low income women, particularly those living in households with no other adult present, and the importance of cultural sensitivity in providing services to women from varied ethnic backgrounds.

This recommendation also implies the need to train more women in medicine and promote them into decision-making positions. As increasing numbers of women are being trained as physicians in the United States, the needs of women are increasingly being integrated, at least into clinical training programs. Nevertheless, women still have not filled the ranks of faculty in medical schools, particularly at higher ranks and in leadership positions.

## 8. Impact of punitive policies for women

Social policies that single out women, particularly pregnant women, for punitive actions need to be eliminated. These policies are both explicit and implicit and most evident for low income and minority women, for example, with regard to criminal liability of pregnant women who report using illicit drugs during pregnancy. Women are singled out explicitly with regard to laws in some states requiring screening of all pregnant women for drug use and, when detected to be positive, their prosecution for child abuse. These laws juxtapose classic ethical principles by giving priority to beneficence for the newborn over the rights of the mother for autonomy. Implicitly, in states without mandatory screening, low income women or women of color are more likely to be screened for drug use than higher income white women and, if found to be positive, are more likely to be reported to child welfare authorities (Chasnoff et al., 1990).

## 9. Impact of reforms on women's health

The sixth recommendation involves the need to develop social policies that ensure economic security for women and continuous access to health care throughout their lifetime. The current climate of welfare reform in the United States has eliminated many public benefits for low income women, without also providing adequate resources for them to
become economically independent. While welfare reform increases the likelihood that women on welfare will move into the labor force, they often can only secure jobs that pay a minimum wage and that do not provide health insurance as a benefit. These jobs often require limited skills, and allow little control by the employee. Stress related to lack of control and low substantive complexity, routinization, and repetitiveness of tasks on the job have been associated with poor psychological health (Elliot, 1996; Gecas and Seff, 1989; Staples et al., 1984). The low wages of jobs many women will have to take is also a concern, as McDonough et al. (this volume) note that health disparities among Canadian women were based on absolute social disadvantage.

Women's simultaneous roles as paid workers and care givers have sparked controversy as society grapples with issues related to comparable worth, gender discrimination in the workforce, child care and the division of household labor among adults. Some research indicates an association of employment with good health, as measured by self-esteem, perceived health, and physical functioning (Pugliesi, 1995; Ross and Mirowsky 1995; Verbrugge, 1985). On the other hand, excessively demanding jobs with low control and conflicting responsibilities are linked with poor health for example, job strain can exacerbate chronic conditions such as hypertension (Brett et al., 1997). McDonough et al. (this volume), nevertheless, found that paid work enhanced the health of Canadian women in spite of their experience with greater chronic stress.

The passage of federal legislation, entitled Temporary Assistance for Needy Families (TANF), to reform welfare in the United States also raises concerns about support services available to families with working mothers as well as job training needs for women who have not previously been employed. Indeed, a legacy of welfare reform may be that it increases the number of roles low income women perform by forcing them into employment without also providing them with adequate supports, such as affordable day care and flexible working hours. Social policies are needed to promote job training, life skills building and literacy, and which are accompanied by affordable health insurance and health care.

A significant number of women may not be able to adapt to the absence of cash benefits, such as women with mental illnesses or with other problems that make them unemployable; their ultimate fate is unknown. A population that will be highly affected by welfare reform is immigrant women, whether or not they have legally or illegally entered in the United States. Benefits to this population, including Medicaid, have been abol-
ished at the Federal level and are available only if states choose to provide them.

## 10. The importance of public health

The final recommendation concerns the importance of public health in moving the women's health agenda forward in the United States and in other developed countries because of its attention to population-based needs of women and its traditional emphasis on multidisciplinary and multiple systems strategies to address the social and economic contexts of women lives. Emphasis on the role of social and economic conditions in determining health date back in the United States to the origins of the Children's Bureau in the early 20th century, although the focus initially was largely on the effect of these conditions on the mother's health and, in turn, the health of her newborn. Fundamental to improving the health of the population is public health's long-standing orientation to social equity, as well as to the perspective that population health is related to social, environmental and behavioral factors (Krieger and Birn, 1998).

Public health is playing a major role in the United States at the national level in the formation of a number of offices related to research and policy on women's health. In the early 1990s, the Office of Research on Women's Health (1990) was created within the National Institutes of Health, a Deputy Assistant Secretary for Women's Health (1993) was appointed and the Public Health Service's Office on Women's Health (1991) and the Office of Women's Health Services within the Substance Abuse and Mental Health Services Administration (1992) were established. Since then, six additional units focused on women's health have been established within the Health Resources Administration, the Centers for Disease Control and Prevention, and the Food and Drug Administration. These units function alongside two others within the Department of Health and Human Services (DHHS) that have established roles in developing policy and administering programs for women - the Maternal and Child Health Bureau and the Office of Population Affairs. Beyond DHHS, the Departments of Labor, Justice and Defense have created organizational loci and initiatives related to the health and well-being of women. In 1995, the White House established an Office for Women's Initiatives and Outreach.

Despite this attention, the field of public health in the U.S. is challenged by ever diminishing resources, marginalization in national public policy debates related to health and increasingly limited control of data and analysis. Moreover, intense political debate about women's rights, particularly with respect to reproductive health, equitable access to economic resources, and women's role in childbearing, dramatically complicates public health action on behalf of women.

## 11. Conclusions

Despite significant gains in recent years in narrowing the gaps in social indicators for men and women and for women of different racial and ethnic backgrounds, disparities persist in relation to burden of illness, educational attainment, employment and earnings. Improving the social climate that influences women's health means addressing these fundamental disparities. Understanding these differences and their implications should drive the design, implementation, and evaluation of policies and programs aimed at improving the health of women in the United States, and other developed countries as well.

Key approaches needed to improve women's health include the notions that health builds or diminishes over decades of life, and that prevention needs to begin early with continued vigilance throughout women's life span. An exclusive focus on pregnancy and maternal roles in policy development has led to missed opportunities, particularly with regard to assuring the health of women prior to beginning childbearing and from the time they stop childbearing until they reach old age. Comprehensiveness and integration of health efforts are key to promoting the health of women. Finally, health policies must build on a base of social policies that ensure economic security for women and that avoid singling them out for punitive actions.

Many groups influence women's health and are concerned with their well-being. Public health entities have the historical mandate and potential capacity, perspective and knowledge to assure the wellness of all women through partnerships and science. Today's challenge is to rekindle the mandate, infused with a more appropriate share of the political attention and resources available for women's health care in the United States.

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[^0]:    * This paper is a slightly revised version of "Introduction to 'Social and economic patterning of women's health in a changing world", Social Science and Medicine, vol. 54 (2002), no. 5, p. 643-647.

[^1]:    * Ce texte est une version légèrement modifiée de «Introduction to 'Social and economic patterning of women's health in a changing world' », Social Science and Medicine, vol. 54 (2002), $\mathrm{n}^{\circ} 5$, p. 643-647. Traduction en français : Éric Vilquin.

[^2]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 649-661.

[^3]:    1. The United Nations uses two indices to capture gender related development and gender empowerment, the Gender Development Index (GDI) and the Gender Empowerment Measure (GEM) (UNDP, 1999, p. 160-162). The GDI measures results for 143 countries in three key indicators of human development: life expectancy, educational attainment, and income, and adjusts those results for gender inequality. For every country, the GDI is lower than the UN's Human Development Index [HDI], showing that gender inequality is universal. But in some cases, the GDI ranks higher than the HDI, suggesting that gender equality does not depend upon a country's income level or stage of development. There are developing countries that do better than richer industrialized nations in promoting women's participation in political and professional activities, as measured by the GEM (UNDP, 1999, p. 133). There are also differences among regions within countries.
[^4]:    2. This is quite different from organized religions as legal or political state-sanctioned authorities, which have often been associated with the oppression of women.
[^5]:    3. Information about the Demographic and Health Surveys, including the MEASURE project, is available at http://www.measuredhs.com.
[^6]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 677-692.

[^7]:    1. The absence of effects of household variables was surprising and so we explored whether lone parent status had any influence on gender differences in health. We found almost no effect when it was added to the models. It played no role in accounting for gender differences in health (the exposure hypothesis), nor did women's health suffer more than that of men in the same circumstance (the vulnerability hypothesis).
[^8]:    2. Distress scores and predicted probability of reporting arthritis/rheumatism were calculated by solving the regression equations at observed sample mean or proportion values.
    3. Our interest in pathways linking paid and unpaid work conditions to health led us to consider whether certain material resources, like household income and home ownership, act as mediators of these relationships. Specifically, separation, divorce or widowhood may affect levels of these resources which, in turn, affect health. Because education does not play the same role in this pathway, we did not consider it in the analyses that follow.
[^9]:    4. We tested whether gender differences in the effects of social support, perceived control, self-esteem, income and home ownership on distress were statistically significant. Interactions involving social support and perceived control were significant, while those involving the latter three were not (McDonough et al., 1999a).
[^10]:    5. See McDonough et al. (1999a) for information on the other health measures for which significant gender differences were observed. These do not show strikingly different patterns and lend support to our conclusions.
[^11]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 707-726.

[^12]:    1. Family is a group of people distinguished within a household on the basis of biological criteria. The following types of families are recognised: marriages without children, marriages with children, lone mothers with children, lone fathers with children.
[^13]:    2. The Cox model belongs to the group of models of proportional hazard, which employs the assumption that the ratio of hazard functions for a given variable will be constant for all time points. To verify this thesis, the cumulative survival curves and the hazard curves were made for age groups in each of the five health conditions under analysis. Shapes of the obtained curves (log-minus-log survival plot) showed,
[^14]:    that the baseline hazard functions are not proportional, which required stratification into the five age groups.

[^15]:    3. Significance of the 2 Log likelihood for the estimated model for women aged 75 and over, when compared with the baseline model (explanatory variables excluded) was at the level more than 0.1.
[^16]:    Notes $a, b, c, d, e$ et $f$ : voir page suivante.

[^17]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 727-740.

[^18]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 741-752.

[^19]:    1. In the past, women in certain professions were dismissed on the grounds that they became married or pregnant. Dismissal of female civil servants upon marriage was abolished in 1957; for teachers, the law was abolished in 1958. It was not until 1976 that the Dutch parliament passed a law under which dismissal upon marriage or pregnancy was forbidden for all women (Van Eijl, 1997).
[^20]:    2. This percentage is given in the population census. The actual percentage of married women in paid employment was higher. Until fairly recently, seasonal employment, domestic services and work by women in family businesses were not included in national censuses; jobs of less than 15 hours a week were also excluded (Morée, 1992). Moreover, a substantial proportion of married women in part-time, paid employment preferred to be registered as housewives (Pott-Buter et al., 1998).
[^21]:    3. Health has several dimensions. The studies we refer to focus on the differences between women in mortality, physical health or psychological distress. Measurement of the latter two greatly differs. For instance, subjective health, chronic diseases, mobility problems, limitations to carry out activities of daily living and the use of medicine, are just a few examples in which physical health is measured.
    4. Some studies also address the role of women as wives, in addition to examining their role as employees and mothers. Note, however, that these studies tend to be interested in the degree to which women's health is protected by marriage rather than in the effect on women's health of caring for others, in this case for the partner.
[^22]:    5. Agreement between the studies is strongest with respect to the positive relationship between women's health and paid employment. There is less agreement regarding the positive relationship between women's health and the presence of children: a number of studies did not find any significant health differences between childless women and mothers (for an overview, see Macintyre, 1992; Ross et al., 1990).
[^23]:    6. Those who reported a chronic disease/disability, were also asked from which age they have this health problem. It turns out that most of them suffer from a chronic illness for quite a long time (mean duration: 12 years).
[^24]:    * L'équipe Enveff est composée de Maryse Jaspard, démographe, responsable de l'enquête, Elizabeth Brown, démographe, Institut de démographie de l'Université Paris I (Idup), Stéphanie Condon, socio-géographe, Jean-Marie Firdion, statisticien, Institut national d'études démographiques (Ined), Dominique FougeyrollasSchwebel, sociologue, Centre national de la recherche scientifique (Cnrs), Annik Houel, psychologue, Université Lumière-Lyon II, Brigitte Lhomond, sociologue, Marie-Ange Schiltz, socio-statisticienne, Cnrs, Marie-Josèphe Saurel-Cubizolles, épidémiologiste, Institut national de la santé et de la recherche médicale (Inserm).

[^25]:    2. L'enquête Enveff, coordonnée par l'Institut de démographie de l'université Paris I (Idup), a été commanditée en 1997 par le service des Droits des Femmes et menée avec le partenariat financier de l'ANRS, la Cnaf, le Fas, l'Thesi, l'OFDT, le Conseil régional d'Île-de-France, le Conseil régional PACA, la mission de recherche Droit et Justice.
    3. Disponible sur le site internet http://www.sante.gouv.fr. Une traduction en anglais est disponible à l'Idup (jaspard@univ-paris1.fr).
    4. Maryse Jaspard et l'équipe Enveff (janvier 2001), «Nommer et compter les violences envers les femmes : une première enquête nationale en France», Population et Societés, n ${ }^{\circ}$ 364, Paris, INED (publication en anglais disponible sur le site internet http://www.ined.fr).
    5. Maryse Jaspard, Elizabeth Brown, Stéphanie Condon, Dominique Fougeyrol-las-Schwebel, Annik Houel, Brigitte Lhomond, Florence Maillochon, Marie-Josèphe Saurel-Cubizolles, Marie-Ange Schiltz, 2001, Les violences conjugales au quotidien, Rapport final au Ministère de l'Emploi et de la Solidarité, Secrétariat d'État aux Droits des Femmes et à la Formation permanente, Service des Droits des Femmes et de l'Egalité. Ouvrage à parâtre : Les violences envers les femmes. Une enquéte nationale, Paris, La Documentation française, 2002.
[^26]:    6. Regroupe les femmes victimes de harcèlement psychologique ou d'insultes répétées ou de violences physiques ou sexuelles, certaines cumulant plusieurs types de violences.
[^27]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 767-782.

[^28]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 783-798.

[^29]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 799-810.

[^30]:    1. The authors are indebted to the Ford Foundation who provided financial support for the project. Special thanks to the CICRED for the opportunity to publish the findings.
[^31]:    Source: Economic and Social Survey, Jamaica 1998.

[^32]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 811-825.

[^33]:    1. Il est très significatif, à ce titre, de constater que, dans les Enquêtes Démographiques et de Santé (DHS), très riches, à la base de nombreux travaux de comparai-
[^34]:    sons nationales et régionales, les informations sur la santé des femmes se limitent exclusivement à leur vie reproductive et sexuelle (mortalité et morbidité maternelles, maladies sexuellement transmissibles, Sida), alors que les questionnaires des opérations de collecte DHS les plus récentes se sont enrichis sur d'autres domaines de recherche et notamment sur les problématiques de genre (Carr et Way, 1994 ; Barrère et al., 1999). Par exemple, l'enquête DHS de l'Égypte en 1995 est très complète sur les questions de statut de la femme. Les enquêtes DHS ont été réalisées par MacroInternational dans presque tous les pays africains, latino-américains et quelques pays asiatiques, avec une même méthodologie et un même questionnaire dans une optique comparative.

[^35]:    2. On dispose en fait, le plus souvent, d'un taux de mortalité maternelle hospitalière ; voir à ce sujet la communication de Mme Guedanna dans ce même séminaire.
[^36]:    3. Cf. la carte du découpage administratif en annexe.
[^37]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 827-838.

[^38]:    1. We thank medical doctor Abdurrahim Guclu, social worker Ayse Gulsen and physiologist Pinar Ilkkaracan for their guidance and comments.
[^39]:    2. Five strategic objectives designed under the "Women and Health" section of the Platform for Action are as follows:

    - Increase women's access throughout the life-cycle to appropriate, affordable and quality health care, information and related services;
    - Strengthen preventive programs that promote women's health;
    - Undertake gender-sensitive initiatives that address sexually transmitted diseases, HIV/AIDS and sexual and reproductive health issues;
    - Promote research and disseminate information on women's health;
    - Increase resources and monitor follow-up for women's health.

[^40]:    3. Early elderliness refers to a situation in which women marry young, give birth and become mother in-law at their early ages. This is observed generally in rural areas and slum regions of urban areas. Women may have some degree of authority over other household members only after being mother in-law and marriage of child is considered as a border line between youth and elderliness for women in those communities. The module contains some questions on early elderliness for some diseases are considered to prevail due to elderliness.
[^41]:    * This paper has already been published in Social Science and Medicine, special issue, vol. 54, no. 5, March 2002, p. 839-848.

