

## **International Conference on**

The Impact of Mortality as Both a Determinant and a Consequence of Poverty and Hunger: A Contribution to Achieving the First Millennium Development Goal (Eradicate Extreme Poverty and Hunger).

**Thiruvananthapuram, India: February 23-25, 2005**

### **Rapporteurs' Report**

#### **First Session**

Two papers were presented in the first session: (i) Causes of Death of the Less than 5-year Old Population of the South Pacific Region of Mexico, 1990-2002 by Elsa Perez and (ii) The paper "Profiles of the Changes in the Levels of Mortality in the Republic of Panama, For Province and Indigenous Districts and Some Considerations related to Poverty and Health, Period 1990-2000 by Regalio J. Lopez Cousin. The discussants were Omas Bulan Samosir and Mala Ramanathan. The session was chaired by Christophe Z. GUILMOTO.

The first paper examined the relationship between poverty and health conditions especially mortality by looking into the profile of causes of death of less than 5 year olds in the Mexican states of Chiapas, Guerrero, Oaxaca and Puebla for years categorized into three periods: which the author called crisis years, recovery years, and stagnation years.

The paper received the following comments/questions/suggestions from the discussant and from the floor: there is need to understand the link between measures of poverty and mortality and how socio-economic factors affect mortality. There is also need for better data to understand the links between mortality and poverty levels. It was also pointed out that in the South Pacific Regions of Mexico there were higher levels of mortality and infant mortality, though there are declines in the same, they are not at the same pace. There is a need to have an appropriate framework to contextualise the paper otherwise in the absence of such framework the linkages between mortality and deprivation cannot be fully explored. Question was raised regarding the gender dimensions and

age distributions of mortality in the area studied. It was also asked to look into how HIV-AIDS issues affect the child mortality in the area. Also the need for a multi-variate framework of analysis to understand the important factors contributing to poverty was raised.

The paper by Regalio J. Lopez Cousin tried to explore the link between deprivation and mortality by taking the case of indigenous regions of Panama as a proxy for deprivation.

The paper received the following comments/questions from the discussant and from the floor: It was pointed out that in spite of almost universal immunization in the country infant mortality rate was seen to be very high. A further analysis to bring out the actual reasons of this high level of infant mortality was suggested. In the case of indigenous regions the need to look into cultural factors like gender bias among others was stressed to have a complete picture of the high levels of mortality and poverty prevailing in these areas. It was suggested also understand the links between childhood deprivation and mortality. In this paper also the need for an appropriate framework to contextualize the paper was stressed. The absence of such a framework resulted in the paper being a mere discussion on mortality. If one is to understand the linkage between mortality and deprivation a framework of analysis is absolutely essential. Another question raised was regarding age distribution of those dead.. A question was asked whether HIV-AIDS was more prevalent among the migrant community, if so whether this HIV-AIDS problem has spread to rural areas when they return to rural areas. Another question raised was whether these indigenous districts were wholly constituted of indigenous people or not. Another suggestion was the need for a multi-variate framework to bring out the most important factors responsible for poverty and the need to look into maternal under-nutrition which is the major cause for under-weight children at birth. It was also suggested to look into the role of literacy among women in preventing maternal under-nourishment. Regarding the high prevalence of infant mortality rates it was suggested to look into how social taboos or cultural factors contribute to infantile deaths. Another suggestion was to test social and cultural factors against economic factors.

## **Second Session**

Two papers were presented in the second session: (i) *The Linkages between Urban Poverty, Child Health and Mortality* by Rania Roushdy and (ii) *the impact of funerals on poverty and starvation cycle in Braziville, Congo* by Benoit Libali. Discussants were Dr. Binitiwatie Soedhwa and Dr. Irudaya Rajan. Dr. Kesaia Seniloli chaired the session.

Rania Roushdy's paper was a case study of households and neighborhoods in Cairo, Egypt. The author observes that although there is higher access of health care services to the urban population, their health risks closely resemble to that faced by the rural population. But, since there is limited information about the slum dwellers, it is difficult to carry out a study on their health care. Given this constraint, the author raises the central question what social resources can poor individuals and communities draw upon to offset the impact of poverty on health. The author explores this question by looking into the social network configuration of the slum dwellers. Her results are based on data collected in the 2003 Egypt Interim Demographic and Health Survey. The author uses a multiple-indicator, multiple-cause (MIMIC) factor-analytic model to estimate the relative standard of living for each household. Using this estimation, it has been found that the living standard exerts substantial influence on early childhood chances of survival.

The major comments that came for the paper both from the discussants as well as the floor are the following: using indicator on work status would make the analysis more interesting and meaningful. There is a need to check whether there is any relation between growth of slums and migration to Cairo. Need to clarify why some of the outcome indicators are same when the health care seeking behavior of slum and non-slum population is different. It would be better to look at the size, history, age and density of the slums or we can say, to look at the sociology of the slums. Location of clusters i.e. whether they are close or not can also be studied. Also look at the interaction effect of different variables before reaching at any conclusion.

In his paper Benoit Libali attempted to study how the cost involved in mortuary ceremonies and related funerals activities had an impact on the socio-economic condition of the family and further, how it pushes the household in poverty, starvation and death cycle. On the basis of information collected from hospitals, communities, burial places he found that that the death ceremonies were

very expensive in comparison with the standard of living of majority of the Congolese living in Brazzaville.

This paper also attracted a lot of attention as it presented a new approach to understand the incidence of poverty and starvation in Brazzaville. The paper received the following comments/suggestions and questions from the discussants as well as from the floor: there is a need to explore how the cultural practices can be accommodated without any (work) loss to the society. There is a need to use an explicit cost of living measures like the per capita expenditure in the analysis. Questions were asked about the existence of a state regulation on funerals expenses, sources of finance of funerals, existence of a community fund, whether the funeral does have any income-generating effect etc. It was suggested that expenses on funerals may also be looked as the investment in social relations.

### **Third Session**

Two papers were presented in this session: (i) Understanding the Poverty-Mortality Relationship: The Philippines Case' by Josefina V. Cabigon; and (ii) Comparative Study on the Effects of Socio-economic Factors, Industrialisation, and Urbanisation on Mortality in Indonesia and Japan by Omas Bulan Samosir. The presentation is followed by discussant's comments and then the floor is opened for comments and suggestion from the audience.

Cabigon's paper explored the relationship between poverty and mortality in the context of Philippines. In the process the paper analyses the relationship at the macro level and micro level. The macro analysis at the global level is based on the few selected countries including Philippines and provinces within the country. The micro-level the analysis is based on the household survey data of Philippines. It is found that though there is a kind of relationship between poverty and mortality at the global level it is observed to be non-monotonic and the provincial and micro level establishes certain relationship. Finally the author advocates for her country the urgency of the policy attention for poverty alleviation and mortality reduction.

The comments from the discussant and other participants are the following: the analysis carried out in the paper at different levels is used different indicators so that different arguments followed. The

scope of the paper in providing meaningful insight was questioned. One needs to be careful in analysing the difference in poverty measurement while exploring the poverty-mortality relationship and analysing the pattern of the relationship at the community level. Dr. Bhargava enquired about the rural-urban difference in the levels of poverty and mortality and their relationship, also the relationship between TB mortality and the HIV/AIDS casualty.

The paper by Omas Bulan Samosir made an attempt to understand the effect of socio-economic factors, industrialization and urbanization on age specific and cause specific mortality rate and compares the situation in two Asian countries, Japan and Indonesia, using factor and multivariate analysis. The study found that at the lower level of economic development (i.e. in case of Indonesia), low-income factor and urbanization is important predictor of mortality whereas in a higher level of development (i.e. in case of Japan) low level of income, industrialization as well as urbanization are crucial for mortality rate across age groups.

The discussant observed that the findings point out that other factors (urbanization and industrialization) over ride low income factor in determining mortality differential during different stages of mortality transition. This phenomenon is explicit in case of Japan than Indonesia because of the fact that Japan is highly developed nation compared to Indonesia. He made a critical remark on the low-income factor influence mortality outcome differently in two different settings. Age classification could not be fruitful for both the countries because gap in the life expectancy. In case of Japan 'Industrialisation' and 'Urbanisation' are found to be important factors for mortality outcome across age groups. But contrary to Japan in Indonesia it is the low Income factor which is crucial to the mortality outcome across age groups. Since in a poor set up it is the 'ASDR', which one will expect to operate, to which the findings confirmed. For a developed country scenario it is the 'CSDR', which is important for mortality outcome. From the floor mainly two comments have come: (i) the set of variables considered for composite index are different in case of Indonesia and Japan so how one could harmonizes the findings for the purpose of comparison and pointed out that how low income can also affect the 'Cause Specific Death Rate'. The logic behind this is, that in a low income situation accidents might be a major factor to the mortality, in contrast to conventional wisdom that 'Cause Specific Death Rate' as a phenomenon is only associated with higher 'Industrialisation' and 'Urbanisation'. (ii) it was pointed out that in Japan, since the variation across

age-groups is not robust as far as mortality is concerned, it might not be appropriate to use multivariate analysis, because groups are more or less harmonized.

#### **Fourth Session**

Three papers were presented in this session: (i) "Perception, Poverty and Health: A Contribution" by D. Narayana; (ii) Poverty Linked HIV/ AIDS as Determinant of Mortality by P. K. Bhargava and (iii) A preliminary analysis of the relationship between generalized deprivation and infant mortality in rural India by Jayaraj. Discussants were Josefina V. CABIGON and Dr. M. Kabir. Rania ROUSHDY chaired the session.

In his paper Dr Narayana tried to unravel the puzzles involved in poverty- ill health relationship using data from a field study conducted in Panchayat in Wayanad district of Kerala. The basic objective of the paper is to highlight the importance of systematic influences on the perception of health status. The paper argues that social influences on self-perception of health could considerably mask the poverty-ill health relationship.

The main comments on Dr Narayana's paper from discussion and floor were the following: The discussant pointed out that the study doesn't go beyond the observed relationship between poverty and ill health among Paniyas and inquire into the reasons behind it. It was suggested that the study should include infant mortality and life expectancy of Paniyas, to give a complete picture of the relationship. A point of dissent was raised from the floor that if culture is attributed to be the reason behind the unusual relationship, then it is mediated not only for Paniyas but also for others. Besides, measurement of health itself is a problem. Health studies like this, based on reported morbidity have a number of limitations.

P. K. Bhargava paper is based on field survey conducted in Bagalkot district in Karnataka. The study has some important empirical findings: AIDS causes 6% of death in the district and 2.9% of the population is infected with HIV/AIDS in the area. AIDS more prevalent in the rural areas and among males. HIV prevalence was high in the 25- 29 age group and among illiterates. Also persons whose marriage was disturbed had the highest prevalence of HIV in both urban and rural areas. Paper also brings out significant patterns of AIDS prevalence among various religion and caste,

where Muslims reports lowest incidence and other non-Hindus and low caste Hindus showing highest incidence. Paper identifies migration and trafficking of women as important factors which spreads AIDS in the district. Authors warn that unless adequate steps are taken to prevent the spread of this epidemic, HIV/AIDS determining mortality levels in India.

The comments from the discussant and floor were the following: it was pointed out that by the discussant the analysis did not follow the framework given in the beginning of the paper. Devdasi system mentioned in the paper needs more explanation. The floor pointed out that the increased prevalence of AIDS among the widows could be because of the transmission of the virus from their diseased husbands. Discussants suggested that the paper should look into the impact of AIDS on poverty along with its prevalence. The use of the term HIV prevalence was suggested instead of HIV morbidity as a better expression of the disease.

The paper by Jayaraj mainly focuses on how poverty and deprivation results in infant mortality in rural India. The paper starts with basic postulate that maternal wellbeing is a key determinant of infant mortality. The Paper gives a look into measurement of deprivation as an important determinant of infant mortality, where deprivation is measured by constructing an index using six indicators, namely public transport, drinking water, medical care, metalloid road, electricity, energy for cooking. The paper provide the insight that only through provision of basic infrastructure, medical care, and education to women is an essential condition to control IMR and highlights the states intervention in the provisioning of these requirements.

The paper attracted the following questions from the discussant and from the floor: The question on the desirability of the multiple regression analysis to understand the relationship was raised. The discussant also revealed that the Generalised Deprivation Index only conceives the deprivation rather than revealing the extend of deprivation. The discussant also questions the use of IMR as one of generalized indicator of maternal well being. The conceptual basis of considering wage participation in agriculture as a key factor determining IMR was raised both from floor and discussant. The need for giving emphasis on the status of women and work participation was sighted by the participants from the floor. The discussion also put forward the need for relative weighting in the construction of the index. The paper did not answer an important question very

much relevant in current policy debate that whether it is the improvement of socioeconomic condition or the better access to medical facility, a key factor in reducing IMR.

### **Fifth Session**

Two papers were presented in the fifth session (i) 'Regional Differences of Mortality in China' by Xiaoying Zheng and (ii) 'Longitudinal Analysis of Possible Links between Poverty and Mortality in Suriname' by Bintiwatie Soedhwa. Dr. Rania Roushdy and Dr. K. S James were the discussants. The session was chaired by Prof. P.R Gopinathan Nair.

The paper by Zheng focused on the issues of regional and gender differences in the average life expectancy, changes of age specific mortality on provincial life expectancy and the impact of different socio economic factors in determining these regional differences in China. The paper finds a continuous improvement in the life expectancy levels of both males and females during the period of analysis. Although females have a higher life expectancy than males, the rate of increase in the life expectancy of females is lower than that of males. With regard to regional differences in life expectancy the paper finds that the relatively prosperous regions have got higher life expectancy. With regard to age specific patterns in decline in life expectancy it is pointed out that mortality decline in all age groups have contributed to increase in life expectancy. The exception is that in recent years decline in the mortality levels among females in the age group of 15-29 has been substantial indicating lower levels of maternal mortality. There is a change in the relative contribution of different causes of deaths to total mortality and in recent times the role of chronic infectious disease has become prominent. Regression results of socio-economic determinants of life expectancy show that increase in education levels, improving sanitation facilities and providing gas and electricity in poor areas will increase the life expectancy. The paper also hinted on the rural urban divisions on health expenditure in China. Both public expenditure and private per capita expenditure on health tend to be highly urban biased

The following important comments and suggestions were made by the discussants and other participants during the course of discussion: Random effects are to be checked for analysing the reasons for regional differences in life expectancy the region specific social and cultural factors. Neighborhood effects should also be analysed for understanding the concentration of low levels of

life expectancy in certain regions. Issue of underreporting in 1990s has to be addressed. Relationship between Life expectancy and poverty has to be explored. The problem should be put in the framework of divergence in economic front and convergence in economic front so that one can analyse the long-term trends in economic and demographic variables together. Decline in the rate of growth of female life expectancy has to be situated in the larger context of increasing female labour force participation and the changing habits. Emphasis should be made on changing nature of relationship of demographic and economic variables across different age groups. While exploring the reasons for regional differences in life expectancy the region specific social and cultural factors and the neighborhood effects are to be taken into account. Underreporting can be one of the factors affecting the validity of the conclusions and one has to ward against that too. The regional differences in life expectancy should also be correlated with the regional differences in the levels of poverty. Time series movements in economic variables have to be analysed along with analysing changes in demographic variables. The decline in the growth of female life expectancy has to be situated in the larger context of increasing female labour force participation and the changing habits. The impact of family planning policy and the role played by AIDS in determining the demographic outcomes should also be highlighted. What is the relationship between family planning efforts of government and demographic outcomes? What is the extent of impact of incidence of AIDS on demographic characteristics of the population?

The paper by Bintiawatie Soedhwa tried to establish the link between poverty and mortality after giving a broad account of the extent of poverty, health profile and socio- economic characteristics of the country. The paper using Engel coefficients at various levels finds a continuous increase in the levels of income poverty in the country. But the country has done well in improving the health status of its population. The levels of real GDP have remained stagnant for all the period throughout but there is a correlation between head count rates and Infant Mortality Rate. The improvement in crucial health variable infant mortality rate can be attributed to the better health care assistance paternal care and wide use of contraceptives whereas malnutrition has got a negative impact. The unavailability of data is a major constraint with regard to further analysis.

The following major comments/suggestions were made by the discussant and by other participants: The analysis has to take into account the regional patterns and causes for regional differences.

There is a need to explain the mechanism through which the improvement in health front has been brought about in a period of stagnant real income. There is need to understand more about the limitations of the data and efforts should be made to use the available data to draw meaningful conclusions. The exact link between poverty and mortality (i.e. the mechanism through which mortality and poverty are related) is not fully analysed in the paper. An Analysis of the regional dimensions of poverty and mortality across different regions may help in getting more insights into the causal relations. A framework should be put in to analyse the process of linkage between poverty and mortality

### Sixth Session

Three papers were presented in the last session: (i) Theoretical linkages between Mortality, Poverty and Hunger by K Navaneetham and Sunny; (ii) Theoretical linkages between Mortality, Poverty and Hunger: The case of Oceania by Alieu SARR and (iii) The case of South Asia ‘They are digging their graves with their teeth – Mortality, Poverty and Nutrition in the pacific’ by Kesala Seniloli. The discussants were Vineetha Menon and Dr. D. Jayaraj. Dr. Ian POOL chaired the session .

Seniloi’s paper discussed the changing pattern of infant mortality, adult mortality and morbidity among the pacific nations. Author opines that though in general there is a reduction in infant mortality as well as a gain in the life expectancy, the degree of these achievements differs greatly among the different pacific nations. Countries with better provision of health care services and health infrastructure could achieve these goals better than those without having these facilities. Since being sick could directly aggravate the conditions of poor and could increase the probability of becoming poor, the author stressed the need for providing more attention to the health problems of the population. Further the author is of the opinion that mere increase in income or creation of employment opportunities might not be able to take care of the multidimensional nature of poverty and thus the author emphasized the importance of public spending to tackle the issue rather than waiting for economic growth to trickle down. This is especially important in the context of pacific nations where the rate of economic growth is generally low due to political instability, ethnic conflicts etc. The author pointed out different probable reasons for the observed trend in the pacific nations such as high rate of growth of urbanization which may lead to scarcity of drinking water as well as

sanitation problems, dependence on food imports, changing pattern of food habits from traditional to modern which may lead to a nutrition loss, changes in life style leading to inactivity and difficulties in providing health care services in the rural areas especially when it is thinly populated. Addressing all of the above mentioned issues in a harmonized way could tackle the issue of poverty and the concomitant vulnerabilities in the pacific nations.

The paper by Alieu Sarr examines the linkages between mortality, poverty and hunger in the West African sub region. It provides a theoretical perspective on the links between mortality poverty and hunger, followed by a descriptive exploration regarding the casual links between them with special reference to HIV/AIDS. The author's contention is that the attainment of peace and political stability in Western Africa is crucial for attaining a rapid reduction in mortality.

The last day of the conference had a special session on "Mortality, Poverty and Hunger: Towards the development of a knowledge base". Three papers were presented in this session exploring the theoretical links between mortality poverty and hunger based on evidences from three regions viz. South Asia, West Africa and Pacific by Navaneetham, Alieu Sarr and Kesaia Seniloli. Dr. Ian Pool chaired the session and the discussants were Dr. Vineetha Menon and Dr. D. Jayaraj.

The first paper by Dr. Navaneetham examined the levels of poverty, mortality and malnutrition in South Asia on a comparative scale with other regions of the world. The study pointed out the inconsistency of lower levels of poverty and mortality on one hand and higher levels of child under-nutrition on the other when South Asia is compared with sub-Saharan Africa. The analysis revealed that this could be explained in terms of the low birth-weight of children in South Asia, which points towards high levels of maternal under-nutrition prevalent in the region. The paper discussed the role of women's agency on child nutrition and survival. The study concluded that timely healthcare interventions in the region maybe one factor that checks translation of child under-nutrition into high child mortality.

Sarr's paper written on the backdrop of the first Millennium Development Goal focussing on 'Eradicating extreme poverty and hunger' examines the linkages between mortality, poverty and hunger in the West African sub region. The West African sub region consists of seventeen countries and is one of the poorest regions of the world with over 55 per cent of its population living on less

than 1\$ a day. Compared to Africa as a whole its western part trails behind in terms of GDP growth. The region is not only economically backward but the same is also true for its social indicators, its human development ranking amongst 173 countries is bottom 25 per cent. Most of the countries in the region are predominantly agricultural employing more than half of its workforce. However agriculture production in this region has been extremely low due to erratic rainfall. Apart from this the region is politically unstable with a large part of it experiencing civil war and of late food security in the region has been threatened by influx of swarms of desert locusts. Four individual factors have been identified in the paper as the main reason for the extreme backwardness of this region they are Mortality, Poverty Hunger and HIV/AIDS. The author's contention is that attainment of peace and political stability in Western Africa is crucial for attaining a rapid reduction in mortality. Mortality is not only a determinant but also a result of poverty and hunger. To overcome the problems related to mortality, poverty and hunger faced by the sub region, it is essential to intensify the efforts towards improving the productivity of agricultural sector, quality of health services and intensify the fight against HIV/AIDS. It is highly essential to undertake all these tasks simultaneously as neglect of any one of these problems can hamper the efforts to solve the other.

Seniloi's paper discussed the changing pattern of infant mortality, adult mortality and morbidity among the pacific nations. The author opines that although in general there has been a reduction in infant mortality as well as a gain in the life expectancy, the degree of these achievements varies greatly among the pacific nations. Countries with better provision of health care services and infrastructure could achieve these goals better than other countries. Since being sick could directly aggravate the conditions of poor and can increase the probability of becoming poor, the author stresses the need for providing more attention to the health problems of the population. Further the author is of the opinion that mere increase in income or creation of employment opportunities might not be able to take care of the multidimensional nature of poverty. Hence the author emphasises the importance of public spending to tackle the issue rather than waiting for economic growth to trickle down. This is especially important in the context of pacific nations where the rate of economic growth is generally low. The author points out different probable reasons for the observed trend in the pacific nations such as high rate of growth of urbanisation which could lead to scarcity of drinking water as well as sanitation problems. Dependence on food imports, changing pattern of food habits from traditional to modern which may lead to a nutrition loss, changes in life style

leading to inactivity and difficulties in providing health care services in the rural areas especially when it is thinly populated. Addressing all of the above mentioned issues in a harmonised way could tackle the issue of poverty and the concomitant vulnerabilities among the Pacific nations.

The following points were raised by the discussants regarding the three papers. In general all the three papers had altogether neglected the cultural dimension. It is important to look in to the same as cultural taboos and practices influence demographic outcomes. Also there is not much rationale for using income as a criteria for measuring poverty since income is a unidimensional indicator while poverty is a multidimensional phenomena. Anthropometric indicators in conjunction with income could be able to provide better insights.

On the first paper the discussants were of the view that female agency is not limited to female literacy and work participation rate. The author could have taken in to cognisance several factors like domestic violence against women and media images. The paper has not looked in to the issue of differences in consumption at the intra-household level as in the literature there has been enough evidences regarding gender discrimination at the household level. The discussants reflections on the second paper were based on the measurement of poverty and the various debates centered around it. The discussant cautioned the authors regarding the usage of \$1 per day or that of a food bundle with 2700 calories. The main limitation of these measures being that they are not rationalised and they remain fixed across age, sex and working population. The papers will be able to provide a more rich understanding of the links between mortality/morbidity and poverty/nutrition if they can incorporate other dimensions of well being than income like access to safe drinking water, availability of health care facilities and clean fuel. The discussants felt that the third paper could have focussed more on the globalisation issue because it seems from the paper that many of its ill-effects are present in the Pacific island countries perspective. This is because one reason given for the high prevalence of mortality and under-nutrition in the region is the outcome of continuous out-migration of health care professionals.