

Health inequalities in urban areas: a guide to the literature

Alison Todd

Alison Todd has a background in medicine and anthropology. Her principal research interests relate to the health concerns of the urban poor, and especially of homeless people and street children. She has recently started a PhD at the London School of Hygiene and Tropical Medicine.

I. INTRODUCTION

WHY SHOULD URBAN development professionals be concerned about variations in health statistics within and between urban areas? Firstly, because the statistics represent vast numbers of early deaths and debilitating illnesses. Secondly, because the distribution of health inequalities in urban areas reflects wider social inequalities: on average the urban rich live for longer and in better health than the urban poor. In Tondo, a squatter settlement in Manila, Philippines, nearly three times as many children die before their first birthday as in non-squatter areas, while diarrhoea is twice as common and tuberculosis nine times as common. In the Bronx, New York City, children are five times more likely to contract tuberculosis than their wealthier neighbours. In London, heart disease and respiratory diseases are twice as common in poor as in rich areas. A useful introduction to urban health inequalities is provided by the chapter on "Urban Environment and Human Health" in the *1996/97 World Resources Report*, from which the above examples are taken.

Why are the urban poor less healthy than their wealthier urban neighbours? The same chapter gives a good overview of the arguments. The urban poor are more likely than their richer counterparts to live in poor physical environments with sub-standard, overcrowded housing, inadequate water supply, sanitation and waste disposal, and higher levels of air pollution and other hazardous substances. Their incomes are generally low and insecure, they own few assets, lack access to resources and are thus less able to cope with adverse events, including ill-health.

Additionally, the stressful nature of their social environment may contribute to higher levels of tobacco, alcohol and drug use, accidents and violence than among their wealthier neighbours.

The living conditions of the urban poor can be measured in absolute terms but can also be measured relative to the status of their wealthier neighbours. Poverty is both an absolute and a relative concept. The close proximity of rich and poor in urban areas means that the poor may be painfully aware of what they have not and what others have. Relative poverty, or social inequality, acting through psycho-social processes may have as deleterious an effect on health as absolute poverty.

The relative nature of the concept of inequality is important: one can only be unequal - in terms of health or other social attributes - in relation to others. Health inequalities describe differences in health status between two or more groups. It is the inclusion of a comparative (generally less disadvantaged) group that distinguishes the study of health inequalities from the study of the health of the poor.

A previous guide to the literature focused on the health of the urban poor (Atkinson 1993). This guide, however, concentrates on urban health inequalities. Most of the literature relates to the South but occasional reference is made to the North to illustrate the global nature of the subject. Two restrictions have been placed on the guide's contents. Firstly, only published material in the English language is included, in the hope that such material will be accessible. Secondly, literature on health care, health service provision and usage has been omitted as the

guide aims to show the influence on health inequalities of all aspects of urban policy, not just health policy.

The guide is structured as follows. Section II, *Introducing Health Inequalities*, describes the growing interest in the international arena in urban health research in the South over the last two decades. Section III, *Investigating Health Inequalities*, provides the background information necessary to an understanding of the research undertaken. Section IV, *Describing Health Inequalities*, illustrates the scale and diversity of the phenomenon in terms of the health problems involved and the comparative groups concerned. The final section, *Explaining Health Inequalities*, discusses approaches to investigating their underlying causes and considers briefly interventions designed to close the health gap.

II. INTRODUCING HEALTH INEQUALITIES

UNTIL RECENTLY, INTERNATIONAL concerns about health inequalities in the South were focused on inequalities between rural and urban areas. Urban areas had the better health statistics and consumed the majority of the health budget, hence urban health received low priority. The focus began to shift in 1977 when a paper by Basta concluded that health inequalities within urban areas in the South were greater than between urban and rural areas. Frequently, the health and nutritional status of slum and squatter dwellers was considerably inferior both to their wealthier neighbours and to the aggregate statistics for the city. Either the poor had been excluded from city health statistics altogether, because they were classed as unofficial or illegal residents, or their health problems had been concealed by the better health of their wealthier neighbours. Many of the studies cited in this guide have since confirmed Basta's findings.

The growing involvement of international agencies in urban health initiatives in the South over the last two decades is charted by Stephens and Harpham (1991). In 1984, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) published a report by Rossi-Espagnet which

achieved a wide circulation. Like Basta before him, Rossi-Espagnet highlighted the poor health of the urban poor. He also stressed the ever-increasing rates of urbanization and the even more rapid increases in the number of urban poor. The same year saw the initiation of the WHO RUD Programme (Environmental Health in Rural and Urban Development and Housing). In 1985, the first international workshop on urban primary health care was funded by OXFAM, UNICEF and the UK Overseas Development Administration. Its proceedings were subsequently published in 1988 in *In the Shadow of the City* by Harpham, Lusty and Vaughan. Beginning in 1985, the International Institute for Environment and Urbanization (IIED) supported studies on the health of the urban poor, later summarized in the 1990 publication *The Poor Die Young* edited by Hardoy, Cairncross and Satterthwaite. Regular WHO and UNICEF workshops on urban health in the South throughout the 1980s contributed to *Spotlight on the Cities* by Tabibzadeh, Rossi-Espagnet and Maxwell, published in 1989.

Many of these initiatives focused on the health problems of the urban poor rather than upon a comparison of their health with the health of their wealthier neighbours. However, the research led to the important realization that health inequalities exist even within the urban poor. Certain sectors of the poor, often termed vulnerable groups, were found to be particularly disadvantaged in their health and social conditions. Those identified in the literature as vulnerable have included children, adolescents, women, elderly people, workers, ethnic minorities and rural-to-urban migrants. Moreover, health inequalities persist within vulnerable groups. Child workers, child sex workers and children from single-parent families have been found to be more disadvantaged than other poor urban children. Rossi-Espagnet, Goldstein and Tabibzadeh (1991) refer to vulnerable groups in a paper which is notable also for an excellent summary of the health problems facing the urban poor.

The focus on the urban poor nevertheless generated growing interest in the scale and diversity of health inequalities between the urban poor and their wealthier neighbours. The early 1990s saw the publication of review articles by Harpham and Stephens

(1991) and Bradley, Stephens, Harpham and Cairncross (1992) which summarized studies to date specifically on the subject of urban health inequalities. The latter publication is particularly valuable, tabulating the findings of over 100 studies and reviewing critically the scope of research. Its authors conclude that most studies have focused on infants and young children, to the exclusion of the health of adults. They have also focused on mortality (deaths) to the exclusion of morbidity (non-fatal disease or illnesses), with the exception of morbidity from diarrhoeal diseases. Most studies have explained urban health inequalities in terms of inequalities in the physical environment, especially in water supply and sanitary facilities. Few studies have paid attention to differences in the more complex socio-economic or psycho-social aspects of urban life.

Recently, these gaps have begun to be filled. Studies by Stephens, Timaeus, Akerman *et al* (1994), described in Section IV, have investigated urban health inequalities in various conditions at all ages. Attention has also shifted to mental health problems in urban areas. The 1995 publication *Urbanization and Mental Health in Developing Countries*, edited by Harpham and Blue, contains chapters on the mental health of vulnerable groups comprising women, children, including street children, and elderly people. However, as Harpham (1994) notes in a review article, there is as yet little information on the scale of inequalities in urban mental health.

Most research into health inequalities in urban areas of the South has adopted what is termed an epidemiological approach to investigation. The next section discusses some of the key concepts of epidemiology as applied to urban health research which are essential to an understanding of the research conducted.

III. INVESTIGATING HEALTH INEQUALITIES

EPIDEMIOLOGY IN MEDICINE (1987) by Hennekens and Buring provides a useful introduction to epidemiological research. Papers by Yach, Mathews and Buch (1990) and Stephens and Harpham (1992) are also rec-

ommended for their coverage of epidemiological concepts as they relate to urban health research in the South.

Epidemiology quantifies health inequalities. Research begins with the selection of the health problem to be quantified and of the urban groups in which it is to be quantified. Selection of the health problem, or health indicator, also involves a decision as to how to measure it - by questionnaire, clinical examination or laboratory test, for example. The method of measurement must be appropriate to the health problem. Hameed, Kadir and Gibson *et al* (1995) found higher rates of diabetes and heart disease in rich areas rather than in poor areas of Karachi, Pakistan. However, their study relied on questionnaires and hence on the respondents' awareness of their own health problems. As the researchers point out, this method may have biased the findings towards higher rates among the rich because of under-reporting of the conditions by the poor who may have less access to, or make less use of, diagnostic medical facilities than their rich counterparts. The possibility of bias - a systematic (ie. consistent) deviation of recorded results from the actual situation due to faults in research design regarding measurement of health indicators or selection of study participants - must be taken into account in all epidemiological studies.

Selection of urban groups requires criteria for identifying all urban residents and for distinguishing between the groups, by area of residence, socio-economic status or gender, for example. If the groups are too large to include all members in the study, then a method of sampling a sub-group of their members has to be devised. Samples should be representative of (ie. resemble closely) the larger populations from which they have been selected. Exclusion of homeless people, for example, biases populations or samples away from the potentially most disadvantaged urban residents.

The measurement and comparison of health indicators in the respective groups describes health inequalities in epidemiological terms. For example, in Pelotas, Brazil, the perinatal mortality rate (deaths in the first week of life) was 45 per 1,000 in families earning less than one minimum salary per capita, but dropped to 13 per 1,000 where families

earned more than ten minimum salaries per capita (Barros, Victora, Vaughan and Estanislau, 1986). However, to explain health inequalities in epidemiological terms, additional steps have to be taken. Firstly, the factor(s) thought to increase the risk of developing the health problem in question has(ve) to be identified and, secondly, exposure to the risk factor(s) has to be measured in the respective groups under investigation.

The temporal nature of the relationship between the exposure to the risk factor and the development of the health problem is important. Because some health problems take a long time to develop, health inequalities may be related to risk factors operating at any time since birth or even conception. For example, a person's weight is an indicator of both past and present nutrition while height is an indicator of past nutrition only. Hence the height of Bangladeshi women in a Dhaka slum was only related to their past schooling and not to their present socio-economic status whilst their weight was related to both (Baqui, Arifeen, Amin and Black 1994). Also, exposure to the risk factor must obviously occur before the development of the health problem. Homeless people frequently have higher rates of mental illness than their housed counterparts but this may in part be because mentally ill people are more likely to become homeless. This is an example of reverse causality: mental illness causes homelessness rather than the other way around. In general, the causes of health inequalities are most easily investigated when the lifetime of experience is short, as in infants.

The next stage is to determine by statistical means whether the health problem is more likely to occur in the presence of the risk factor than in its absence, ie. whether a statistical association exists between the health indicator and the risk factor or whether chance alone could explain the findings. Importantly, exposure to the risk factor(s) and subsequent development of the health problem must occur in the same individual. Ecological studies describe the distribution of health problems and risk factors in groups but are unable to say whether the individuals with the health problem were the

same individuals exposed to the risk factor. These studies describe health inequalities and other inequalities but they cannot explain the one in terms of the other.

Statistical association is not, however, sufficient to prove that the risk factor caused the health problem. Alternative explanations for the statistical association, including bias and reverse causality, have to be excluded. One alternative explanation of particular relevance to the investigation of urban health inequalities is the effect of confounding. Confounding arises when the investigation fails to identify or measure other possible risk factors for the health problems. For example, in Pelotas and Porto Alegre, Brazil, four environmental risk factors - poor water supply, poor sanitary facilities and housing, and overcrowding - were associated statistically with increased infant mortality (ie. deaths in the first year of life) from diarrhoea (Victora, Smith, Vaughan *et al* 1988). However, the four environmental risk factors often occurred together in the same household. Also, the socio-economic characteristics of households and the type of milk consumed by infants are additional influences on the risk of infant diarrhoeal deaths. In this study, once all these other risk factors had been taken into account in the statistical analysis, only lack of in-house piped water remained as a significant risk factor. Infants from houses obtaining their water from a public standpipe or well were 4.8 times more likely to die of diarrhoea than those with in-house piped water.

Finally, it is important to see whether the findings are consistent with other studies. If many studies have reported similar statistically significant associations between a risk factor and a health outcome, then a cause-effect relationship may be assumed. Research into urban health inequalities in the South has thus far generated many studies describing greater levels of ill-health in poor rather than in rich communities. However, fewer studies have identified the specific causes of specific health inequalities. The next section describes health inequalities; the final section discusses approaches to identifying their causes.

IV. DESCRIBING HEALTH INEQUALITIES

TWO STUDIES, PUBLISHED together, are recommended for their illustration of the scale and diversity of urban health inequalities. Stephens, Timaeus, Akerman *et al* (1994) utilized routinely collected census and survey data to investigate differences in rates of mortality at all ages and from a variety of causes in Accra, Ghana and Sao Paulo, Brazil. In both cities, the poor of all ages experienced higher death rates from infectious diseases than their wealthier neighbours. Childhood deaths from infectious diseases showed the greatest differences between rich and poor areas, being five times higher among poor children under 15 years old in Accra, and four times higher among poor children under five years old in Sao Paulo. In Accra, poor adults also had higher mortality rates from infectious diseases, though the difference between rich and poor adults in Sao Paulo was less marked. Mortality differences for respiratory diseases between rich and poor were greatest in Sao Paulo for young children and for adults in Accra. In both cities, adult mortality rates from diseases of the circulatory system - mainly heart disease and strokes - were twice as common in poor as in rich areas.

Circulatory diseases were in fact responsible for the greatest number of deaths in both Accra and Sao Paulo. Until recently, such non-infectious diseases - also termed chronic or degenerative diseases - were thought to be important only in the countries of the North which had completed what is known as the epidemiologic or health transition. The transition describes the change in disease patterns from infectious to degenerative which began in European countries in the mid-nineteenth century in response to improvements in nutrition, water supply and sanitary facilities. As these improvements reflected rising standards of living, the degenerative diseases were also termed "diseases of affluence". The term is, however, misleading as the diseases concerned are nowadays more common among the poor of the North. Like their northern counterparts, the urban poor of Accra and Sao Paulo had higher rates of circulatory diseases than their wealthier neighbours but rates of infectious

diseases also remained high. The urban poor of Accra and Sao Paulo therefore experienced the worst of both worlds: the infectious diseases of the South and the degenerative diseases of the North. The chapter in the 1996/97 *World Resources Report* referred to in the introduction, describes the differing health experiences of the urban poor in the South and in the North, and also summarizes the Accra and Sao Paulo study.

In Sao Paulo, the researchers also investigated differences in mortality rates from homicides and accidents. They concluded that Sao Paulo is experiencing an "epidemic of violence", which is hitting its poorest citizens hardest. Homicide rates were over three times higher in deprived areas than in the most affluent areas. Homicides emerged as a major cause of death of men of working age. In 1992, nearly 4000 homicides occurred in the city. The poor also experienced higher mortality rates from traffic accidents than their wealthier counterparts.

The second part of Stephens, Timaeus, Akerman *et al's* (1994) publication uses data from the Demographic and Health Survey (DHS) programme to compare rates of mortality from all causes, and of morbidity from diarrhoea and impaired growth, of young children within and between urban areas of Ghana, Brazil, Egypt and Thailand. Importantly, the study investigates health inequalities relating to gender. For biological reasons the survival and health of boys is slightly worse than that of girls in the first few years of life. In Ghana, Thailand and to a lesser extent Brazil, that pattern was followed. In Egypt, however, boys and girls had equal survival chances while the growth of girls was poorer than that of boys.

Differences between the countries were also revealing. Health inequalities between poor and rich urban children tended to be least in Ghana and greatest in Brazil. Therefore, relative to the health of their wealthier urban neighbours, the urban poor of Ghana were the least disadvantaged and the urban poor of Brazil the most disadvantaged. Of the poor groups, however, the urban poor in Ghana were the most unhealthy and the urban poor of Thailand the most healthy. These findings illustrate the difference between relative and absolute measures of health. The urban poor of Ghana scored worst in abso-

lute measures of health but best in relative measures of health inequalities with respect to their wealthy neighbours. They also illustrate how choice of comparative groups influences the description of health inequalities. Urban poor children in Ghana fared best when comparing poor and rich in the same country but fared worst when comparing the poor of the different countries.

Comparative groups chosen for measurement of health inequalities have ranged in scale from international to national levels of analysis, and, within nations, from inter-urban to intra-urban to intra-poor neighbourhood levels of analysis. The international and national comparisons described below combine urban and rural statistics but the striking nature of their findings merit inclusion.

The opening chapter of the *1995 World Health Report: Bridging the Gaps* highlights vast health inequalities between the South and the North. Life expectancy (ie. average number of years a newborn is expected to survive) in one of the poorest countries in the South is 43 years. In one of the richest countries in the North it is 78 years and the gap is widening. The mortality rate in children under five years old is more than ten times greater in the poorest countries than in the richest countries. The discrepancy has staggering implications: the WHO estimates that if all countries in the world experienced the living conditions of the richest countries of the North, the number of children dying each year before their fifth birthday would fall from its current figure of more than 12 million to 366,000 (World Health Organization 1995).

A 1994 UNICEF report describes a recent and alarming escalation in health inequalities between the former communist countries of Eastern Europe and Western Europe. Mortality rates in Russia and the Ukraine between 1989 and 1993 were higher than any recorded in peacetime Europe this century. The report also documents major increases in rates of morbidity. Men have been worse affected than women. The principal causes of mortality and morbidity were homicide and suicide, especially in young men, circulatory diseases, especially in middle-aged men, and increasing infant and child ill-health due to birth problems, poor nutrition and infectious diseases. The report dis-

cusses the health impacts of both the communist legacy and the post-communist democratic and market reforms. Importantly, it distinguishes between the material impact of falling incomes and deteriorating services and the psycho-social impact of growing alienation and despair. Although lacking data, the report refers to growing social inequalities within the region (UNICEF 1994).

To a lesser degree, health inequalities exist between the countries of the North. Countries with lower infant mortality rates and higher life expectancies tend to have a more equal income distribution. Also, countries with widening inequalities in health tend to have widening inequalities in wealth. Wilkinson (1994) and Benzeval, Judge and Whitehead (1995) refer to recent international comparisons in the North.

A key national study of health inequalities, first published in 1980 as *The Black Report*, uncovered wide-ranging inequalities between occupational classes in the United Kingdom. (To ensure greater circulation, this was subsequently published in 1982, edited by Townsend and Davidson). Infant mortality rates, risk of death before retirement age and rates of chronic illness were all two or more times greater in the lowest than in the highest occupational class. A subsequent report *The Health Divide* (Whitehead 1988) documented persisting, and even growing, health inequalities throughout the 1980s. Feinstein (1993) reviews *The Black Report*, *The Health Divide* and other influential national studies of health inequalities in the United Kingdom, other European countries and in the United States. Notably, some of these studies revealed health inequalities even between the higher occupational or social classes, suggesting that there is no threshold of affluence above which health inequalities disappear.

Inter-urban studies in the United Kingdom have documented considerable health inequalities between two Scottish cities, Glasgow and Edinburgh, which are situated only 40 miles apart. Watt and Ecob (1992) showed that, on average, the citizens of Glasgow die four years younger than their neighbours in Edinburgh. The difference in patterns of mortality could not be fully explained either by behavioural risk factors such as diet and

smoking or by biological risk factors under behavioural influences such as cholesterol which is influenced by diet. However, they mirrored differences in quality of housing between the cities. The research on health inequalities between Glasgow and Edinburgh is summarized by Watt (1996) in a recent edition of the British Medical Journal which contains several other articles on health inequalities in the North.

In Glasgow, its poorest citizens die on average ten years younger than their wealthy neighbours. Other intra-urban studies reveal the contribution of racial discrimination to health inequalities. In New York City, McCord and Freeman (1990) report higher mortality rates in predominantly black or Hispanic districts than in neighbouring white areas. Mortality rates were highest in Harlem where 96 per cent of residents were black and 41 per cent lived below the poverty line. The elevated mortality rates were due mainly to circulatory diseases, cirrhosis of the liver, homicides and cancers. In Harlem, men are less likely to reach the age of 65 than are men in some of the poorest nations in Asia - for instance Bangladesh. The links between race, health and living conditions in the United States are investigated in a review article by Manton, Patrick and Johnson (1987).

Finally, health inequalities persist even between and within poor urban communities. Gillis, Welman, Koch and Joyi (1993) report a two-fold difference in rates of mental health problems between elderly black migrants living in two townships in Capetown, South Africa. Both townships are poor but the worst affected township was more recently settled, its residents had poorer housing and services, less income and less education, and fewer spoke the dominant language of the city. Reichenheim and Harpham (1989, 1991a, 1991b) studied health inequalities within a single squatter settlement in Rio de Janeiro, Brazil. Over a third of women had mental health problems, especially those with low incomes, poor living conditions and little education. Their mental health problems were, in turn, a risk factor for infections and accidents among their children. Other risk factors for poor child health included long periods of separation of mother and child, female headed

households and poor socio-economic and environmental conditions. Reichenheim and Harpham's investigation of risk factors illustrates the epidemiological approach to an explanation of health inequalities. The final section discusses epidemiological and other approaches to an explanation of health inequalities.

V. EXPLAINING HEALTH INEQUALITIES

THIS SECTION BEGINS with epidemiological explanations. Epidemiology aims to separate the general relationship between ill-health and poverty into specific relationships between health indicators and risk factors so that targeted interventions can be directed at the specific causes of specific health problems in specific groups. Epidemiological explanations have tended to concentrate upon risk factors which have proven cause-effect relationships with health problems, which operate through known mechanisms such as water quality and diarrhoeal disease or smoking and lung cancer. However, as the literature makes clear, the relationships between health problems and risk factors may be complex.

Firstly, a single health problem may be influenced by several risk factors. In Jakarta, Indonesia, respiratory disease in women was associated with the use of mosquito coils and inadequate ventilation in the home; respiratory disease in their children with inadequate garbage disposal and a mother with respiratory disease (Surjadi 1993). Surjadi's study associated respiratory disease with risk factors inside the home. Other studies have associated respiratory disease with risk factors outside the home. Infant mortality from pneumonia in Rio de Janeiro was linked to neighbourhood air quality (Penna and Duchiae 1991). Hardoy and Satterthwaite (1989, 1991) make a useful distinction between environmental risk factors operating in the home, the workplace, the neighbourhood and the city.

Secondly, a single risk factor may influence health in more than one way. Quality and quantity of water supply influence the risk of acquiring diarrhoeal disease which, in turn, is an important risk factor for child-

hood malnutrition. In urban areas, water frequently has to be purchased and its cost varies according to the type of supply. In Khartoum, Sudan, water purchased from vendors was up to 12 times more expensive than water piped to homes (Cairncross and Kinnear 1992). Generally, poor communities relied on vendors while wealthy communities received piped water. In one poor community, an astonishing 57 per cent of household income was consumed by water. The high cost of the water supply may have contributed to the community's high levels of childhood malnutrition by diverting money away from the food budget.

Finally, health may influence poverty as much as poverty influences health. Pryer (1993), in an excellent study of a low-income settlement in Khulna, Bangladesh, found the poorest households to be in the poorest health. Her study clearly demonstrated the vicious cycle in which ill-health and poverty interact. If family earners were too ill to work, and could not be replaced by other family members, their family's poverty worsened because of earnings lost and resources spent on health care. Worsening family poverty contributed to further ill-health among all family members by reducing the resources available for food, health care etc., thus starting the cycle again. Consequently, the unhealthy poor became more unhealthy and even poorer, generating ever-widening health and social inequalities.

Pryer's study investigated the links between health and socio-economic status, in contrast to most epidemiological studies which have concentrated upon risk factors in the physical environment. Songsore and McGranahan (1993) have criticized such research for ignoring the impact of socio-economic status on environmental factors. Income, ownership of assets and access to resources influence the quality of environment in which one can afford to live and the resources available for food, health care, etc., which mediate the effects of the environment upon one's health. The focus on environment has occurred mainly in the South. In the North, epidemiology has focused upon the individual: on behavioural risk factors or upon biological risk factors open to behavioural modification. However, as Benzeval, Judge and Whitehead (1995) observe, such explanations fail to con-

sider why poor people behave as they do. They ignore the structural aspects of poverty - shortage of local shops and public transport, inadequate leisure and child care facilities, for example. Epidemiology also frequently fails to consider non-material aspects of poverty such as lack of social support or feelings of alienation. Friedmann (1992) equates poverty with disempowerment. Rather than measuring poverty in terms of basic needs such as water supply and sanitation, he measures it in terms of bases of social power including knowledge, skills and social organization.

These criticisms of specific epidemiological explanations lead back to more general explanations for urban health inequalities. All aspects of ill-health - infectious and degenerative diseases, psycho-social and mental health problems - can be linked to all facets of poverty - inadequate environment, low socio-economic status, disempowerment and social exclusion. Health inequalities reflect a total environment of poverty - physical and social - as described by Satterthwaite (1993). According to this perspective, reduction of urban health inequalities requires broad-based, rather than selective, interventions. The 1995 publication *Urban Health in Developing Countries: Progress and Prospects*, edited by Harpham and Tanner, describes recent health initiatives undertaken by agencies including the World Bank and UNICEF, and non-governmental organizations in poor urban areas. The book advocates a multisectoral, decentralized approach towards planning and implementing interventions and participation in the process by the communities involved. In general terms, initiatives aim to provide the urban poor with their basic needs and to empower them to take control over their lives. Poverty reduction, in both its material and non-material aspects will, it is hoped, lead to health improvements and hence to a reduction in health inequalities between the urban poor and the urban rich.

However, directing interventions solely at the poor ignores inequality in that it ignores the relationships between the poor and their wealthier counterparts. Importantly, studies of health inequalities have the potential to reveal what the rich have as well as what the poor have not. So far in the South, the

outcome of such studies has rarely extended beyond the provision of basic needs to the have-nots by interventions which leave the haves untouched. Such interventions have the potential to reduce urban health inequalities but not to eliminate them altogether because health inequalities are a product of social inequalities as well as of absolute poverty.

The subject of social inequalities alone could easily fill several guides to the literature and it can only be touched upon here. Successive United Nations Development Programme's (UNDP) Human Development Reports assess contemporary inequalities between the North and the South. For example, the fourth chapter of the 1994 *Human Development Report* describes how labour flows, trade and debt payments move capital from the South to the North and how political and economic considerations of donors frequently divert aid from the poorest countries and the poorest groups within them. The urban poor were, according to the UNICEF publication *Adjustment With A Human Face*, hardest hit by the impact of structural adjustment programmes (SAPs) imposed on countries of the South by the World Bank and the International Monetary Fund. The deleterious consequences of SAPs for health have been most evident in sub-Saharan Africa. Sanders and Sambo (1991) implicate SAPs in the spread of the Human Immunodeficiency Virus (HIV) in Africa among the poor. They also link HIV to the effects of economic recession, patterns of urban development and the colonial legacy. Ogoh Alubo (1991) echoes their views: in his opinion SAPs are but one manifestation of unequal power relations between sub-Saharan Africa and the governments, banks, international institutions and multinational corporations of the North which have extended unbroken from the colonial era to the present day.

The focus on social inequality rather than upon absolute poverty draws attention to the potential for redistributive measures to reduce health inequalities via reductions in social inequalities. For example, a restructuring of the United Kingdom tax and benefit systems as a means of redistributing resources from richer to poorer sections of the population is advocated in *Tackling Health*

Inequalities (Benzeval, Whitehead and Judge 1995), whilst the 1994 UNDP report outlines strategies for redressing international imbalances in the flows of trade and aid between the North and the South. Interventions aimed at reducing social inequalities by redistributive means may offer the best hope for reducing health inequalities, however difficult they may be to implement or even to consider.

REFERENCES

- Atkinson, S.J. (1993), "Urban health in the Third World: a guide to the literature" in *Environment and Urbanization* Vol.5, No.2, pages 146-152.
- Baqi, A.H, S.E. Arifeen, S. Amin and R.E. Black (1994), "Levels and correlates of maternal nutritional status in urban Bangladesh" in *European Journal of Clinical Nutrition* Vol.48, pages 349-357.
- Barros, F.C., C.G. Victora, J.P. Vaughan and H.J. Estanislau (1987), "Perinatal mortality in southern Brazil: a population based study of 7,392 births" in *Bulletin of the World Health Organization* Vol.65, No.1, pages 95-104.
- Basta, S.S. (1977), "Nutrition and health in low-income urban areas of the Third World" in *Ecology of Food and Nutrition* Vol.6, pages 113-124.
- Benzeval, M., K. Judge and M. Whitehead (1995), *Tackling Inequalities in Health: An Agenda for Action*, Kings Fund, London.
- Bradley, D., C. Stephens, T. Harpham and S Cairncross (1992), *A Review of Environmental Health Impacts in Developing Country Cities*, Urban Management Programme Discussion Paper No. 6, The World Bank, UNDP and UNCHS (Habitat), Washington DC.
- Cairncross, S. and J. Kinnear (1992), "Elasticity of demand for water in Khartoum, Sudan" in *Social Science and Medicine* Vol.34, No.2, pages 183-189.

Guide to the Literature

- Cornea, G.A., R. Jolly and F. Stewart (1987), *Adjustment with a Human Face*, Clarendon Press, Oxford.
- Feinstein, J.S. (1993), "The relationship between socio-economic status and health: a review of the literature" in *The Milbank Quarterly* Vol.71, No.2, pages 279-322.
- Friedmann, J. (1992), *Empowerment: The Politics of Alternative Development*, Blackwell Publications, Oxford.
- Gillis, L.S., M. Welman, A. Koch and M. Joyi (1991), "Psychological distress and depression in urbanizing elderly black persons" in *South African Medical Journal* Vol.79, pages 490-495.
- Hameed, K., M. Kadir, T. Gibson, S. Sultana, Z. Fatima and A. Syed (1995), "The frequency of known diabetes, hypertension and ischaemic heart disease in affluent and poor urban populations of Karachi, Pakistan" in *Diabetic Medicine* Vol.12, pages 500-503.
- Hardoy, J.E., S. Cairncross and D. Satterthwaite (editors) (1990), *The Poor Die Young: Housing and Health in the Third World Cities*, Earthscan Publications, London.
- Hardoy, J.E. and D. Satterthwaite (1989) *Squatter Citizen: Life in the Urban Third World*, Earthscan Publications, London.
- Hardoy, J.E. and D. Satterthwaite (1991), "Environmental problems of Third World cities: a global issue ignored?" in *Public Administration and Development* Vol.11, pages 341-361.
- Harpham, T., T. Lusty and P. Vaughan (1988), *In the Shadow of the City: Community Health and the Urban Poor*, Oxford Medical Publications, Oxford.
- Harpham, T. and C. Stephens (1991), "Urbanization and health in developing countries" in *World Health Statistics Quarterly* Vol.44, No.4, pages 62-69.
- Harpham, T. (1994), "Urbanization and mental health in developing countries: a research role for social scientists, public health professionals and social psychiatrists" in *Social Science and Medicine* Vol.39, No.2, pages 233-245.
- Harpham, T. and I. Blue (editors) (1995), *Urbanization and Mental Health in Developing Countries*, Avebury, Aldershot.
- Harpham, T. and M. Tanner (editors) (1995), *Urban Health in Developing Countries: Progress and Prospects*, Earthscan Publications, London.
- Hennekens, C.H. and J.E. Buring (1987), *Epidemiology in Medicine*, Little, Brown and Company, Boston.
- Manton, K.G., C.H. Patrick and K.W. Johnson (1987), "Health differentials between blacks and whites: recent trends in mortality and morbidity" in *The Milbank Quarterly* Vol.65, Supplement No.1, pages 129-199.
- McCord, M. and H.P. Freeman (1990), "Excess mortality in Harlem" in *The New England Journal of Medicine* Vol.322, No.3, pages 173-177.
- Ogoh Alubo, S. (1990), "Debt crisis, health and health services in Africa" in *Social Science and Medicine* Vol.31, No.6, pages 639-648.
- Penna, M.L.F. and M.P. Duchicade (1991), "Air pollution and infant mortality from pneumonia in the Rio de Janeiro metropolitan area" in *Bulletin of the Pan American Health Organization* Vol.25, pages 47-54.
- Pryer, J. (1993), "The impact of adult ill-health on household income and nutrition in Khulna, Bangladesh" in *Environment and Urbanization* Vol.5, No.2, pages 35-49.
- Reichenheim, M.E. and T. Harpham (1989), "Child health in a Brazilian squatter settlement: acute infections and associated risk factors" in *Journal of Tropical Paediatrics* Vol.35, pages 315-320.

- Reichenheim, M.E. and T. Harpham (1991a), "Maternal mental health in a squatter settlement in Rio de Janeiro" in *British Journal of Psychiatry* Vol.159, pages 683-690.
- Reichenheim, M.E. and T. Harpham (1991b), "Child accidents and associated risk factors in a Brazilian squatter settlement" in *Health Policy and Planning* Vol.4, No.2, pages 162-167.
- Rossi-Espagnet, A. (1984), *Primary Health Care in Urban Areas: Reaching the Urban Poor in Developing Countries*, UNICEF and WHO, Report No.2499M, World Health Organization, Geneva.
- Rossi-Espagnet, A., G.B. Goldstein and I. Tabibzadeh (1991), "Urbanization and health in developing countries: a challenge for health for all" in *World Health Statistics Quarterly*, Vol.44, No.4, pages 185-244.
- Sanders, D. and A. Sambo (1991), "AIDS in Africa: the implications of economic recession and structural adjustment" in *Health Policy and Planning* Vol.6, No.2, pages 157-165.
- Satterthwaite, D. (1993), "The impact of health on urban environments" in *Environment and Urbanization*, Vol.5, No.2, pages 87-111.
- Songsore, J. and G. McGranahan (1993), "Environment, wealth and health: towards an analysis of intra-urban differentials within Greater Accra Metropolitan Area, Ghana" in *Environment and Urbanization* Vol.5, No.2, pages 10-34.
- Stephens, C. and T. Harpham (1991), *Slum improvement: Health Improvement?*, Public Health and Policy Departmental Publication No.1, London School of Hygiene and Tropical Medicine, London.
- Stephens, C. and T. Harpham (1992), "Health and environment in urban areas of developing countries" in *Third World Planning Review* Vol.14, No.3, pages 267-282.
- Stephens, C., I. Timaeus, M. Akerman, S. Avle, P.B. Maia, P. Campanario, B. Doe, L. Lush, D. Tetteh and T. Harpham (1994), *Environment and Health in Developing Countries: An Analysis of Intra-Urban Differentials Using Existing Data*, London School of Hygiene and Tropical Medicine, London.
- Stephens, C., G. McGranahan, M. Bobak, A. Fletcher and G. Leonardi (1996), "Urban environment and human health" in *World Resources 1996-1997: A Guide to the Global Environment*, published by the World Resources Institute, UN Environment Programme, UNDP and the World Bank, pages 31-55.
- Surjadi, C. (1993), "Respiratory diseases of mothers and children and environmental factors among households in Jakarta" in *Environment and Urbanization* Vol.5, No.2, pages 78-86.
- Tabibzadeh, I., A. Rossi-Espagnet and R. Maxwell (1989), *Spotlight on the Cities: Improving Urban Health in Developing Countries*, World Health Organization, Geneva.
- Townsend, P. and N. Davidson (editors) (1982), *The Black Report on Inequalities in Health*, Penguin Books, London.
- United Nations Children's Fund (1994), *Central and Eastern Europe in Transition, Public Policy and Social Conditions: Crisis in Mortality, Health and Nutrition*, Economies in Transition Studies: Regional Monitoring report No.2, UNICEF International Child Development Centre, Florence.
- United Nations Development Programme (1994), *The Human Development Report*, UNDP, New York.
- Victoria, C.G., P.G. Smith, J.P. Vaughan, L.C. Nobre, C. Lombardi, A.M.B. Teixeira, S.C. Fuchs, L.B. Moreira, L.P. Gigante and F.C. Barros (1988), "Water supply, sanitation and housing in relation to the risk of infant mortality from diarrhoea" in *International Journal of Epidemiology* Vol.17, No.3, pages 651-654.

Guide to the Literature

Watt, G.C.M. and R. Ecob (1992), "Mortality in Glasgow and Edinburgh: a paradigm of inequality in health" in *Journal of Epidemiology and Community Health* Vol.46, pages 498-505.

Watt, G.C.M. (1996), "All together now: why social deprivation matters to everyone" in *British Medical Journal* Vol.312, 20 April, pages 1026-1029.

Whitehead, M. (1988), *The Health Divide in Inequalities in Health*, Penguin Books, London, pages 217-356.

Wilkinson, R.G. (1994), *Unfair Shares: The Effects of Widening Income Differences on the Welfare of the Young*, Barnardo's, Ilford.

World Health Organization (1995), *The World Health Report: Bridging the Gaps*, Report of the Director General, World Health Organization, Geneva.

World Resources Institute (1996), *World Resources 1996-1997: A Guide to the Global Environment*, published by the World Resources Institute, UN Environment Programme, UNDP and the World Bank, Washington DC.

Yach, D., C. Mathews and E. Buch (1990), "Urbanization and health: methodological difficulties in undertaking epidemiological research in developing countries" in *Social Science and Medicine* Vol.31, No.4, pages 507-514.