Urban inequalities in mental health: the case of São Paulo, Brazil

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SUMMARY: *This paper describes how the number of people suffering from mental ill-health has been under-estimated in urban areas in Africa, Asia and Latin America. It also explains how the complex range of factors that contribute to mental ill-health, and the ways in which they interact, remain poorly understood. It then describes the findings from research on mental health in three sub-districts of São Paulo City: one with relatively poor quality housing and low-income households, one predominantly middle-class with better housing and one with high-class housing and high average incomes.*

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I. INTRODUCTION

FOR CITIES TO prosper, it is argued, urban populations as a whole should have the opportunity to enjoy good health. In the background paper on "Creating Healthy Cities in the 21st Century" presented at the recent United Nations Conference on Human Settlements, it was stated that in healthy cities "...promoting health and preventing disease and injury was recognized as being in everyone's interest and as everyone's responsibility."[1] Allowing large proportions of an urban population to experience significantly inferior living conditions is unjust and has implications for the health and well-being of all the occupants of a city. Maintaining human health is vital not only from a humane standpoint but also from an economic one - healthy workers are productive workers.

Despite this, urban inequalities in health exist and, in the cities of the South,[2] the scale of such differentials is often large and the range of health problems faced by the urban poor extensive. Stephens *et al* undertook a study of health differentials in Accra, Ghana and São Paulo, Brazil.[3] They found, as expected, that the urban poor suffered disproportionately from the infectious and parasitic diseases associated with inadequate provision for water supply, sanitation, drainage and garbage collection. But they also found that the urban poor suffered disproportionately from non-communicable diseases (e.g. heart disease) which had been considered primarily as diseases suffered by wealthier groups and associated with their diets and

lifestyles. It was concluded that inequalities in physical, social and environmental conditions were largely responsible for such differentials and that there was a lack of understanding of the implications of social disadvantage and a tendency for the material disadvantages of urban poverty to be considered in isolation of the broader context in which poverty occurs.[4]

Although the World Health Organization's popular definition of health gives physical and mental health equal emphasis, mental health has never enjoyed the attention devoted to physical health problems on international public health agendas. In spite of this, work done on mental health issues has recognized poverty as a risk factor for mental ill-health.[5] This paper aims to describe why a consideration of mental ill-health in cities in the South is important. It will also discuss urban inequalities in mental health status, using São Paulo as an example, and possible explanations for this inequality will be examined.

II. MENTAL HEALTH IN THE SOUTH

DESPITE THE RELATIVELY low status accorded to mental ill-health on international public health agendas, it is gradually being recognized as a serious problem in the South. It is a problem that affects a large number of people, creates a great deal of suffering and produces a considerable burden on health services and society as a whole. What follows is a list of some of the main points pertinent to any consideration of mental ill-health in the South.

- Around 90 per cent of all mental disorders can be classified as common mental disorders.[6] "The clinical features of such morbidity include a mixture of anxiety, depression, insomnia, fatigue, irritability, poor memory/concentration, somatic symptoms and somatic concern."[7] Those suffering from common mental disorders are often unable to work, may have difficulties bringing up their children and can suffer from related physical health problems.

- The prevalence of common mental disorders has been estimated at between 12 and 46 per cent in countries in the South depending on how mental ill-health is measured and on the samples used.[8] In terms of the burden such disorders place on society, the publication of the "World Development Report 1993: Investing in Health" provided the first estimate of the impact of mental disorders on the global burden of disease.[9] It was found, for example, that, among young adult (15-44 year old) women in "demographically developing countries", depression was the fifth largest cause of the disease burden, coming after maternal causes, sexually transmitted diseases, tuberculosis and HIV.[10] The methods employed in the calculation of the global burden of disease are not ideal and much of the data used in the World Development Report were of poor quality or based on the estimates of expert committees. However, the global burden of disease analysis does provide

1. WHO (1996), "Creating healthy cities in the 21st century", dialogue on health in human settlements, background paper, United Nations Conference on Human Settlements, 3-14 June 1996, page 1.

2. In this paper, the term "the South" is used to denote countries in Africa, Latin America and Asia (except Japan). The author is aware of the unsatisfactory nature of this term.

3. Stephens, C., I. Timaeus, M. Akerman, *et al* (1994), *Environment and Health in Developing Countries: an Analysis of Intra-urban Differentials using Existing Data*, London School of Hygiene and Tropical Medicine, UK; SEADE, Brazil; and Republic of Ghana.

4. Stephens, C. (1995), "The urban environment, poverty and health in developing countries" in *Health Policy and Planning* Vol.10, No.2, pages 109-121.

5. 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.

6. Goldberg, D. and P. Huxley (1992), *Common Mental Disorders*, Routledge, London.

7. Cheng, T.A. (1989), "Urbanization and minor psychiatric morbidity: a community study in Taiwan" in *Social Psychiatry and Psychiatric Epidemiology* Vol.24, pages 309-316.

8. See reference 5.

9. World Bank (1993), *World Development Report 1993: Investing in Health*, Oxford University Press.

10. Blue, I. and T. Harpham (1994), "The World Bank *World Development Report 1993: Investing in Health* reveals the bur-

den of common mental disorders but ignores its implications" in *British Journal of Psychiatry* Vol.165, pages 9-12.

a starting point. Informed estimates leading to explicit valuation are preferable to no formal estimates (and ultimately implicit valuation forming the basis of decision-making).

- The majority of people suffering from common mental disorders are not in touch with health services. But those who are tend to present with a variety of superficial physical complaints (for example headaches, general aches and pains) that are caused by their underlying mental ill-health. The failure on the part of medical professionals to recognize cases of mental ill-health due to patients presenting with physical symptoms results in low detection rates of common mental disorders. This, in turn, results in inappropriate treatment being given and the misallocation of, frequently scarce, resources. It also obscures the true levels of mental ill-health in a community.

- The burden of common mental disorders falls predominantly on young adults (15-49 years old). Given that this is the most economically productive group in any society, the implications of this preponderance of mental ill-health are grave. Within the adult population, women appear to suffer around twice the rates of common mental disorders as men. Explanations for this highly consistent finding vary but Paykel [11] identifies four possibilities: the different help-seeking behaviour of the sexes; biological causes; social causes; and the differential acknowledgement and direction of distress. Paykel concludes that it is most probably a combination of all the above factors, particularly the last two, that has led to women suffering predominantly from common mental disorders. All the explanations work in the same direction, that is, to increase the prevalence in women as compared to men.

11. Paykel, E.S. (1991), "Depression in women" in *British Journal of Psychiatry* Vol.158 (supplement 10), pages 22-29.

- Literature exploring the possible causes of common mental disorders emphasizes the importance of social and environmental factors and the relatively minor role played by biological factors.[12] Risk factors for common mental disorders vary and include those related to long-term difficulty due to a poor social and physical environment, for example overcrowded housing, unemployment, and insecure tenure. Negative life events, for example, the death of a spouse, loss of employment, separation from partner and migration have also been shown to be related to mental ill-health.[13] However, it is important to bear in mind that some life events, although considered negative, can, in certain circumstances, have beneficial impacts on health, for example migration might involve a move from a deprived area to one with relatively greater opportunities and facilities. In addition to long-term difficulties and life events, a lack of positive social support has been found to be detrimental to mental health. Thoits describes social support as "…'a social fund' from which people may draw when handling stressors … (it) usually refers to the functions performed for the individual by significant others, such as family members, friends, and co-workers." She goes on to

12. See reference 7.

13. See reference 5.

state that "We already know from amassed epidemiological and survey based evidence that social support, a sense of control and self-esteem, and certain coping skills make a significant difference in preventing or reducing physical and mental health problems."[14]

- There are problems associated with definitions of mental ill-health. This is because the existence of a universal state of mental **health** on which definitions of mental **ill-health** could be based was counter-intuitive to many. However, a study using data from 15 countries stressed the existence of similar forms of psychological disorder across cultures.[15]

The preceding list has presented, among other things, a justification for the consideration of mental health problems in the South where the emphasis has traditionally rested on health problems of a physical nature. In addition to the focus on countries in the South, urban areas have attracted the attention of various researchers investigating mental health. To date, studies comparing rates of mental ill-health in urban and rural areas have not produced any consistent findings and it would appear that the question of whether or not urban areas produce higher rates of mental ill-health than rural areas is likely to remain in dispute.[16] It is now widely accepted that it is poverty, rather than rural or urban residence, that plays a crucial role in creating high levels of stress and subsequent mental ill-health.[17] However, focusing on urban areas makes sense for the following reasons: this is where the majority of the world's population will live in the future; the problems of urban and rural health are different in nature (although not necessarily in extent or severity) and this needs to be taken into account in research; and urbanization has resulted in changes in social structure which have an impact on mental health.

III. INEQUALITIES IN MENTAL HEALTH IN THE CITY OF SÃO PAULO

URBANIZATION CAN PROVIDE opportunities for positive growth but those able to enjoy the beneficial impacts of urbanization are often in the minority - the majority of urban dwellers face various threats to their livelihoods. "Increasingly, cities are becoming the world's starkest symbol of the maldistribution of resources, both physical and societal. These inequalities have serious impacts on the health of urban dwellers everywhere but especially in the fast-growing towns and cities in the developing world".[18]

Recent work exploring inequalities in health in large urban centres of the South has stressed the dynamic nature of the health profile of such cities. Stephens, considering the case of São Paulo, elaborates on the complexity of health inequalities in the city: infectious and parasitic diseases (predominantly related to a poor physical environment) still play a relatively important role in childhood ill-health but it is the non-communi-

14. Thoits, P.A. (1995), "Stress, coping, and social support processes: where are we? What next?" in *Journal of Health and Social Behaviour* (extra issue) pages 64 and 70.

15. Ormel, J., B. VonKroff, S. Ustun, *et al* (1994), "Common mental disorders and disability across cultures" in *JAMA* Vol.272, pages 1741-1748; see also Pretorius, W. (1995), "Mental disorders and disability across cultures: a view from South Africa" in *The Lancet* Vol.345, page 534.

16. Webb, L. (1984), "Rural-urban difference in mental disorder" in Freeman, H.L. (editor), *Mental Health and the Environment*, Churchill Livingstone, London.

17. Harpham, T. and I. Blue (editors) (1995), *Urbanization and Mental Health in Developing Countries,* Avebury, Aldershot, UK; see also Desjarlais, R., L. Eisenberg, B. Good and A. Kleinman (1995), *World Mental Health: Problems and Priorities in Low-income Countries*, Oxford University Press, New York.

18. Stephens, C., G. McGranahan, *et al* (1996), "Urban environment and health" in World Resources Institute, *World Resources: A Guide to the Global Environment 1996-97*, Oxford University Press, page 31.

cable diseases (including mental ill-health), more explicitly related to socio-economic factors, that now feature prominently in adult life and which require an altogether different public health perspective if efforts for their reduction are to succeed.[19]

Between 1991 and 1992, the "Brazilian Multicentric Study of Psychiatric Morbidity" was carried out in three urban centres: Brasilia, Porto Alegre and São Paulo.[20] Within the City of São Paulo, data were collected in three sub-districts, Brasilândia, Vila Guilherme and Aclimação, chosen for their contrasting socio-economic characteristics. A cluster sampling technique was used and each respondent (the sample numbered 1,742) was screened for the presence of a mental disorder using a questionnaire developed in Brazil, the "Questionnaire for Adult Psychiatric Morbidity".[21] In addition to the information collected related to mental health, questions were also asked about socio-demographic variables. The data revealed a highly significant ($p < 0.001$) variation in the prevalence of probable cases of mental disorder across the three sub-districts: 21 per cent in Brasilândia (the lowest socio-economic sub-district); 16 per cent in Vila Guilherme (the middle socio-economic sub-district); and 12 per cent in Aclimação (the highest socio-economic sub-district). These differences in prevalence are even more striking when it is considered that the majority of the population in São Paulo resides in sub-districts similar in nature to Brasilândia and only a minority are able to enjoy the prosperous conditions found in Aclimação. The next section will seek to shed some light on reasons why this inequality in mental ill-health occurs.

IV. POSSIBLE EXPLANATIONS FOR THE INEQUALITY IN MENTAL HEALTH STATUS

THAT PEOPLE LIVING in low-income urban environments suffer disproportionately from mental health problems as compared to their richer urban neighbours will come as no surprise to many readers. Marsella states that as development progressed, "…material wealth, political power and social status emerged as the only apparent safeguards against the pressing tides of uncertainty that accompanied urbanization." He goes on to state that "… poverty, as a composite index of deprivation and disorganization, will most likely emerge as the single greatest predictor of urban mortality and physical and mental morbidity. This fact must be acknowledged, for poverty is not an uncontrollable virus but rather the outcome of specific social, political and economic circumstances which can be prevented."[22] Despite Marsella's broad view of the impact of poverty on mental health, research attempting to explain the link between poverty and mental ill-health has tended to have a narrow focus on individual level risk factors (for example, migration status, unemployment, low income and lack of education).

In the case of São Paulo, data from the Brazilian Multicentric Study revealed significant differences between the percentage of migrants in the three sub-districts, with Brasilândia containing the highest percentage of migrants and Aclimação the low-

19. See note 4.

20. Almeida-Filho, N., J.J. Mari, E. Coutinho, *et al* (1991), *The Brazilian Multicentric Study of Psychiatric Morbidity: Methodological Features and Prevalence Estimates*, unpublished manuscript; see also Mari, J.J., N. Almeido-Filho, E. Coutinho, E. *et al* (1993), "The epidemiology of psychotropic drug use in the city of São Paulo" in *Psychological Medicine* Vol.23, pages 467-474.

21. Santana, V. (1982), "Estudo epidemiologico das doencas mentais em um bairro de Salvador" in *Serie de Estudos em Saude* (*Secretaris de Saude de Bahia*) Vol.3, pages 1-122 (supplement).

22. Marsella, A. (1990), "Urbanization and mental disorders: an overview of theory and research, and recommendations for interventions and research, Paper prepared for the World Health Organization's Commission on Health and the Environment, pages 2 and 4.

est. The pattern was similar for those whose family income fell into the lowest category. Further analysis of these data is currently being undertaken by the author. However, previous research relating to the link between migration and mental health has stressed that migration alone cannot be considered as a risk factor for mental health. It is only when recent migration is combined with low-income status that any significant increase in the risk of becoming mentally ill is observed.[23]

Such analysis is typical of mainstream epidemiology and other disciplines espousing quantitative methods and is useful in highlighting at-risk groups. However, the focus on individual risk factors as causes of mental ill-health has been at the expense of a consideration of the wider impact of poverty as suggested by Marsella. This imbalance is understandable when it is considered that public health professionals traditionally seek out specific cause-effect relationships that can then be the focus of relatively simple interventions but it is now understood that the full complexity of urban health problems must not only be recognized but explicitly taken into account when actions for their amelioration are devised.[24]

In the case of common mental disorders, with their vast array of associated social and environmental determinants, following an individual exposure-disease model is particularly problematic. Lacking the basic goods and facilities for quality of life to be maintained is only one aspect of poverty - how people relate to the deprived circumstances in which they find themselves and the social meanings attached to those circumstances is another, less well-analyzed, aspect. Wilkinson suggests that the link between inequalities in wealth and inequalities in health (both mental and physical) revolves around psycho-social factors:[25]

> "First, psycho-social processes emanating from a perception of one's status, economic insecurity or relative deprivation may impact directly on health. Second, psycho-social stress may affect smoking and other health related behaviour. Third, attempts by people on low incomes to maintain socially acceptable standards in more visible areas of consumption are likely to involve saving on food and other necessities which could damage health."[26]

In urban areas, where inequalities in wealth are both vast and visible, Wilkinson's hypothesis that a reaction to "how the other half live" can have an impact on health seems particularly appropriate. Notions of inequality imply strong links between people and their surroundings (including the environment and other people). The effects of place or community on health are increasingly being acknowledged and it is clear that many of the factors related to mental ill-health operate at a level beyond the direct influence of any one individual.[27] The importance of considering such contextual factors is summarized in the following citation:

> "Lack of amenities and opportunities to lead healthy or

23. Reichenheim, M. and T. Harpham (1991), "Maternal mental health in a squatter settlement in Rio de Janeiro" *British Journal of Psychiatry* Vol.159, pages 683-690.

24. See reference 4.

25. Wilkinson, R. (1994), "The epidemiological transition: from material scarcity to social disadvantage?" in *Daedalus* Vol.123, No.4, pages 61-78; see also Wilkinson, R. (in press) "How can secular improvements in life expectancy be explained?" in Blaub, D., *et al* (editors), *Health and Society*, Routledge, UK.

26. See Wilkinson 1994 in reference 25.

27. Ekblad, S. (1993), "Stressful environments and their effects on quality of life in Third World Cities" in *Environment and Urbanization* Vol.5(2), pages 125-134; see also Satterthwaite, D. (1993), "The impact on health of urban environments" in *Environment and Urbanization* Vol.5, No.2, pages 87-111; also Jones, K., C. Duncan and G. Moon (1994), "Individuals and their ecologies: analyzing the geography of chronic illness within a multilevel modelling framework, paper presented at the 6th International Medical Geography Symposium, July 1994, University of British Columbia, Vancouver; and Macintyre, S., S. Maciver and A. Sooman, (1994), "Area, class and health: should we be focusing on places or people?" in *Journal of Social Policy* Vol. 22, No.2, pages 213-234.

health- promoting lives may be as important for assessing the health needs of the population as knowledge of their personal characteristics, and policies designed to improve local environments may be as effective as individually targeted health promotion activities ... We therefore advocate research which focuses directly on the health-promoting or health-threatening features of local social and physical environments, and local and national health promotion policies which take into account features of places as well as features of people".[28]

28. See Macintyre, Maciver and Sooman 1994, page 232, in reference 27.

In addition to recent work emphasizing the links between place, context or environment and health, some work has attempted to link contextual issues with mental health in particular. Ekblad refers to the pioneering work of Selye on the subject of stress.[29] Selye defined stress as an incongruence between individuals and their environments. He used the term environment in a broad sense to include both physical aspects (e.g. overcrowding, pollution) and social aspects (e.g. lifestyle factors). Ekblad *et al* emphasize the way in which urbanization has produced social and environmental changes that impact on stress levels and, therefore, mental health. They divide the built environment into three levels: housing characteristics, the wider neighbourhood and the urban area as a whole. Good quality housing is that which provides sufficient space, easy access to services and friends and few personal hazards. A health-promoting neighbourhood would be one where there is good physical infrastructure (roads, drains, etc.) and services (health, educational, etc.).[30] In terms of the urban area as a whole, Satterthwaite mentions the importance of residents' level of satisfaction with the housing and neighbourhood as compared to other parts of the urban area. [31]

29. See Ekblad 1993 in reference 27; see also Selye, H. (1956), *The Stress of Life*, McGraw Hill, New York; and Selye, H. (1974), *Stress Without Distress*, Lippincott: Philadelphia.

30. Ekblad, S., *et al* (1991), *Stressors, Chinese City Dwellings and Quality of Life*, Swedish Council for Building Research, D12.

31. See Satterthwaite 1993 in reference 27.

In seeking to elucidate the kinds of stress-inducing factors that operate at a contextual level and analyze how these vary between sub-districts with (usually) inhabitants of contrasting socio-economic status, focus group discussions were held with women living in the three previously mentioned sub-districts in São Paulo.

The discussions revolved around the following themes:

- a description of the women's daily lives;
- background information on the sub-district;
- information on recent changes in the sub-district;
- negative aspects of living in the sub-district;
- positive aspects of living in the sub-district;
- a comparison of the sub-district with the rest of the city; and
- information on the well-being of residents.

The questions were ordered in such a way as to allow the participants to respond to relatively simple queries at the start of the discussion before proceeding to the more complex issues that made up the bulk of the discussion. It was decided to exclude any mention of mental health as this often gives rise to notions of severe mental disorders (for example schizophrenia)

and could have detracted from the aim of the discussions. Four focus groups were conducted in each sub-district and each focus group consisted of between four and six women. The participants were from low-income households, varied in age from 19 to 86 years old and were of different migratory and educational status. Some initial findings from the focus group discussions are presented here, briefly.

Concentrating on the factors that the women considered stressful, some differences between the three sub-districts emerged and what follows is a brief glimpse at some of the findings. In the case of Brasilândia, women mentioned a multitude of problems ranging from deficiencies in the physical infrastructure in the sub-district to security issues and the threat of violence:

> "I don't like where I live, there are lots of shacks. The roads aren't paved, we made the drains ourselves. There are people who live right on top of sewage. There's flooding ... there's a place near where I live where the water runs down the road - I don't want my son to get ill" Carla, Brasilândia.

> "There is a lack of safety at night. We listen to gunshots, there's violence. The traffic is violent, cars don't stop at traffic lights. They don't look out for children going to school" Denise, Brasilândia.

> "Where I live there are gunshots, even during the day. If we are outside when it happens, we run in because we are frightened. This happens at any time, not just at night. People grab their kids and run away" Maria, Brasilândia.

In the case of Vila Guilherme, specific problems related to frequent flooding and heavy traffic were discussed. Violence was also mentioned as a problem, mainly in terms of burglaries and car theft but, in general, the women did not feel that the situation was as bad as in other parts of the city.

> "The flooding needs to be stopped. Last week my furniture got ruined ... my son was ill, his cold didn't get better because of the damp. We had three floods in one week" Ana, Vila Guilherme.

> "There's the problem of the lorries. They've already broken my wall twice ... they destroy the pavements ... when they switch on their engines at five in the morning no one sleeps ... if you open the window, you get that strong smell of fumes and burning oil ... it makes me feel ill, I have to keep the window closed all day" Susie, Vila Guilherme.

> "A boy was run over and died on the road. Various children have been run over. There are a lot of cars. Everyone here would like there to be road bumps ... the people drive quickly, carelessly. There are no traffic signs" Rosa, Vila Guilherme.

"They robbed my house twice. The house can't be left empty. I'm scared of leaving the house to go and look for a job" Joana, Vila Guilherme.

In Aclimação, after mentioning various problems related to the physical facilities and appearance of the sub-district (rubbish in the street, pollution), the women talked mainly of the fear of violence.

"What really worries people is safety. All the houses on my road have bars (at the windows) and even so thieves got into my neighbour's house. People worry. I live close to the park and worry when the children go out to play" Alice, Aclimação.

"The general complaint of the women in the neighbourhood is of fear. They are afraid to go out and sweep the pavement because a burglar might get into the house" Freda, Aclimação.

The preceding quotations provide an idea of the range of socio-environmental factors perceived as stressors by the women themselves. Clearly, women living in all three sub-districts find their and their families' well-being threatened by a variety of socio-environmental factors. They worry about the effects of factors that operate largely beyond their immediate control. From the above quotations, it can be seen that the severity and type of environmental threats varies between the sub-districts with the women in Brasilândia facing a greater number of more extreme stressors than those living in Vila Guilherme and Aclimação.

V. CONCLUSION

IN AN EDITORIAL on urban health issues in *The Lancet* it was stated that "... to keep cities profitable into the 21st century more attention will need to be paid to aspects of health other than the purely physical."[32] Mental ill-health is a growing problem and one that urgently requires attention. This paper has attempted to highlight the significant public health impact of mental ill-health in cities of the South and advocates increasing resources being directed towards tackling this problem.

The inequalities in mental ill-health in São Paulo were demonstrated and possible reasons for this variation provided. It is suggested that for the problem of mental ill-health to be successfully confronted, a broad understanding of poverty, taking into account both individual and contextual factors, is required. Such an approach is in line with current thinking in urban health research which suggests that an integrated approach, and one that acknowledges the complexity of urban health problems, is the way forward.[33]

32. Anon (1994), "Editorial: city limits" in *The Lancet* Vol.343, pages 1303-1304, May 28.

33. See reference 1; see also Werna, E., I. Blue and T. Harpham (1996), "The changing agenda for urban health" in Cohen, M., *et al* (editors), *Preparing for the Urban Future: Global Pressures and Local Forces*, Woodrow Wilson Center Press, Washington DC and reference 4.