Commentary

Poverty and mental health: Towards a research agenda for low and middle-income countries. Commentary on Tampubolon and Hanandita (2014)

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1. Introduction

Social Science and Medicine recently published a study by Tampubolon and Hanandita (2014), which provides new evidence regarding the relationship between poverty and mental health in Indonesia. The study makes an important contribution to research on the social determinants of mental health in low and middle-income countries (LMIC), for several reasons. Firstly it presents new findings from a large nationally representative dataset ($N = 29{,}029$) in Indonesia, the 4th most populous country in the world. Secondly it contributes to the debate regarding the association between poverty and mental disorders, in the light of a previous study by Das et al. in Social Science and Medicine (Das et al., 2007), which included data from Indonesia. Thirdly it provides a more valid mental health outcome measure than previously used in Indonesia (the Centre for Epidemiological Studies Depression scale (CES-D)) and includes variables that may moderate or mediate the relationship between poverty and mental health, namely social capital, religiosity, gender and adverse events. Fourthly the authors

use Poisson regression analysis to address problems of skewness in mental health instruments of this nature.

Tampubolon and Hanandita (2014) found that a 1% increase in per capita household expenditure was associated with a 0.05% decrease in CES-D score, holding all other covariates constant. Those who live with an income of less than $2 per day had a 5% higher CES-D score than those who did not. To quote: "These findings provide support for the established view regarding the deleterious association between poverty and mental health in developed and developing countries" (Tampubolon and Hanandita, 2014: p 20).

Tampubolon and Hanandita's findings contradict those of Das et al. (2007), which indicated inconsistent associations between poverty (measured as per capita household expenditure) and mental health (measured using an instrument derived from the General Health Questionnaire) when controlling for physical health status in four nationally representative samples. However, Tampubolon and Hanandita confirm findings from a wider pool of data from 115 studies conducted in 36 LMIC, reported in a systematic literature review of poverty and common mental disorders published between 1990 and 2008 (Lund et al., 2010). The review found that 79% of community-based studies that employed multivariate analyses showed a significant positive association between adversity in a diverse range of poverty measures and increased rates of common mental disorders. Despite this general trend, the literature presented heterogeneous findings across different domains of poverty, with stronger and more consistent associations with common mental disorders being evident for measures such as education, food insecurity, housing, social class, socio-economic status and financial stress; while measures such as income, employment and particularly expenditure were more equivocal.

Tampubolon and Hanandita draw fresh attention to the importance of mental health in international policy debates and development targets and the need for further research on the poverty—mental health relationship. If greater clarity could emerge from research on the population level social and economic interventions that have an impact on public mental health and wellbeing (or conversely the mental health interventions that influence the social

and economic status of individuals and households), this would have significant implications for the place of mental health in national and international development targets.

2. Social determinants of mental health in LMIC: a field in its infancy

The study of the relationship between mental health and various aspects of poverty has a relatively long history in high-income countries, dating from the classic 1939 study by Faris and Dunham, which showed that the prevalence of psychosis was higher in poor slum neighbourhoods of Chicago than in wealthier neighbourhoods (Faris and Dunham, 1939). A wide array of cross-sectional, longitudinal and intervention studies in high income countries have documented the complex relationships between a range of poverty measures and mental disorders, yielding specific theories regarding social causation and social drift (or social selection) (Dohrenwend et al., 1992; Hudson, 2005). However, the study of poverty and mental health in LMIC is relatively young. In our systematic review of studies of poverty and common mental disorders, the number of studies between 1990 and 2008 increased steadily from 0 in 1990 to 17 in 2008, with 82% of studies in the review published since 2000 (Lund et al., 2010).

3. Neglect of mental health in development policies

Despite this rapidly growing field, the links between mental health and poverty continue to be neglected in international and national development policies. Why in the face of the growing evidence has mental health been neglected by development policies? Part of the problem appears to relate to the general neglect of mental health in national and international health policies, and the reasons for this are multi-faceted and complex (Bird et al., 2010; Tomlinson and Lund, 2012). Yet some of the reasons must be related to the state of research on poverty and mental health in LMIC. These include, firstly the relatively nascent nature of the field in LMIC; secondly, the ambiguity of some findings, as described above in the work of Das et al. (2007), although these remain a minority; thirdly, the inconsistent and imprecise measures of both poverty and mental illness – as Cooper and colleagues point out in their review of 139 studies that address the relationship between poverty and common mental disorders in LMIC, 123 studies did not provide specific definitions of the concept of poverty being used, and very few used standardized or validated measures of the construct (Cooper et al., 2012); and fourthly the complexity of the field in itself, which embraces diverse poverty measures, diverse mental disorders with complex aetiologies, multiple mediating and moderating variables and complex causal pathways within the broad trajectories of social causation and social drift/selection.

4. What are the main areas for future research?

To address the ongoing neglect of mental health in international development policy discourse, the field of research needs to become more robust and provide clearer and more consistent messages to policy makers. In the field of observational epidemiology, these need to include messages regarding the likely mechanisms of the social causation pathway (specifically which social determinants confer risk and resilience for the mental health of which populations and under what circumstances); and the social drift or social selection pathway (which particular mental health conditions at what life stages confer risk and resilience for social and economic outcomes of which individuals and households).

To stimulate debate among researchers, practitioners and policy makers and to inform potential future funding for this neglected

area, I would like to propose a research agenda for the study of poverty and mental health in low and middle-income countries. A tentative proposal covers the following areas.

Firstly we need more precise measurement of both poverty and mental health in epidemiological research in LMIC. Thus in mental health epidemiology studies, more attention needs to be paid to how socio-economic risk factors are conceptualized and measured. The ubiquitous "high/medium/low SES" (Cooper et al., 2012) should be replaced with more precise measures of income, expenditure, assets (with locally valid asset indices), education (measured in years of school completed, rather than broader categories of primary and secondary school), employment (including "unemployed and looking for work" as well as "unemployed and not looking for work"), financial stress, housing (including structural and overcrowding domains), nutrition, food security and water security. Where possible these should be reported at individual and household level. Similarly, there is a need for ongoing development of valid and reliable diagnostic and screening tools for a variety of mental, neurological and substance use disorders, as observed by several researchers in the field of global mental health (Prince, 2013). Most mental health epidemiology studies that include poverty risk factors in LMIC employ screening instruments or measures which are indicative of probable disorder, but do not provide clinical diagnoses (Lund et al., 2010). These measures often have unknown sensitivity and specificity in relation to a clinical diagnosis, particularly in the diverse cultural settings of LMIC (Kagee et al., 2013).

Secondly we need more diversity in the mental health outcomes studied. Much of the poverty–mental health research is conducted on so-called common mental disorders (including depression and anxiety disorders). We need to broaden the field of study on social determinants in LMIC to include schizophrenia, bipolar mood disorder, epilepsy, child and adolescent behavioural and developmental disorders, substance use disorders, dementias and suicide. These disorders are likely to interact with various dimensions of poverty in diverse ways, and studies that document these specific relationships are warranted. Furthermore we need to examine the poverty–mental health relationship for these disorders across the lifespan, for example examining the effects of early deprivation (including maternal deprivation) on a range of disorders during the life course.

Thirdly, we need theory-driven studies that focus on more specific causal pathways. Essential for this task are longitudinal datasets that allow for the testing of specific social causation and social selection/drift theories in relation to specific populations. For example is social causation or social drift (or both) implicated in the association between depression and income, expenditure or assets? More broadly, there are a number of theoretical hurdles that need to be overcome. For example, where can mental health be located in relation to the capability framework of Sen (1999), and neo-utilitarian approaches, such as those espoused by Richard Layard (2006) and others, not least in the annual World Happiness Report (Helliwell et al., 2013). Plagerson argues that including mental health in social and economic development discourse facilitates a focus on social justice and equality, since population mental health is not possible without them; and a focus on the individual, since we are able to assess the impact of uneven economic development on the lives of individuals and families (Plagerson, 2014).

Fourthly, studies need to be conducted of more diverse socio-economic strata. We know that income may be predictive of mental health or wellbeing up to a certain threshold, after which the association attenuates (Ruta et al., 2006). Thus stratifying analysis of causal pathways (for example the effect of household economic shocks on depression or vice versa) by income level, or by

severity of illness may shed light on particularly vulnerable groups, and the need for specific primary, secondary or tertiary prevention interventions. Questions might include: do social drift pathways apply more readily among low-income or higher income populations or among more severely depressed individuals than less severely depressed individuals?

Fifthly, we need more robust research on the associations between economic inequality and mental health, at national and regional levels. Some studies have shown a strong association between income inequality and adverse mental health and substance abuse outcomes in selected high income countries (Wilkinson and Pickett, 2006). However Rai et al. (2013) in a study using interview data of 187,496 individuals from 53 countries participating in the WHO World Health Surveys found no association between country level income inequality and depression. There are risks of ecological fallacies with national level data, namely that the relationship between exposure and disease outcome is conducted at a population level, not individual level, and confounding factors, operating either within or between the groups under comparison may not be accounted for in the study design. Studies of the effect of economic inequality on mental health in LMIC need to address this in both individual and national level data, to shed further light on the mental health consequences of economic inequality.

Finally there is an urgent need for intervention research that addresses both social causation and social drift/selection pathways. In a previous systematic review of interventions addressing both of these pathways in LMIC, we found mixed evidence on the mental health benefits of financial poverty alleviation interventions, but compelling evidence that mental health interventions yield individual and household level economic benefits (Lund et al., 2011). However, this field remains in its infancy, and there is a great need for more robust research that assesses specific mechanisms of the potential effects of poverty alleviation interventions on a diverse range of mental health outcomes. To build the economic case for mental health, I would argue that it is imperative that all trials of mental health interventions in LMIC should include an economic evaluation component, and if possible some economic outcome measures.

5. What are the policy priorities?

Although this field is in its infancy, there are clear messages that we can transmit to policy makers. There is reasonably consistent evidence that low education, food insecurity, inadequate housing, low social class, low socio-economic status and financial stress are associated with increased risk for depression and anxiety disorders in LMIC. There is also compelling evidence that providing mental health care leads to individual and household economic benefits in LMIC. For these reasons we have sufficient evidence to include mental health in the post-2015 Sustainable Development Goals. These targets need to include investment in the scaling up of evidence-based, human rights oriented mental health care (Lancet Global Mental Health, 2007; WHO, 2008). This needs to be measured through input indicators such as government commitments to mental health budgets and human resources, and outcome measures such as increasing treatment coverage, and population level mental health and wellbeing. In this regard, it is vital that we collect routine nationally representative mental health epidemiological data, to track population mental health and wellbeing over time, in relation to social and economic development indicators. This is needed to assess the mental health consequences of economic development policies (for example effects on suicide), and the links between poverty, inequality and mental health.

6. Conclusion

Mental health is both an end and a means to social and economic development. Tampubolon and Hanandita's study from Indonesia draws our attention once again to the manner in which income and expenditure are integrally linked with depression in LMIC. It also compels us to refine and consolidate the study of the social determinants of mental health (and the mental health determinants of societies). This is particularly important in LMIC, where our knowledge is most sparse and the need is greatest. This article has proposed some potential avenues for further research, and is intended to stimulate debate among researchers, policy makers and practitioners, regarding the priorities for this field.

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