Review of: "Income distribution and health: What do we know from Chinese data?"

Michael Dare, Jolanda Jetten[1], Belen Alvarez Werth

1 University of Queensland

Potential competing interests: The author(s) declared that no potential competing interests exist.

This study utilised a large historical dataset to examine the relationship between inequality and health outcomes in China between 1989 and 2015. Consistent with broader research in the field, the authors found a link between greater inequality and worse health outcomes. This high-level finding is interesting and important given the period of rapid development in China that the data spans. However, the authors' assertion that structural factors explain the relationship between inequality and poor health outcomes is undermined by shortcomings in their literature review and theoretical engagement, as well as a somewhat confusing analysis of data.

The authors drew upon quite limited literature when discussing potential mechanisms of inequality, and this was particularly evident with regard to psychosocial effects. They proposed a pathway whereby the social distress caused by inequality affected health by influencing people to engage in harmful behaviours such as drinking and smoking. This very limited conceptualisation is not representative of the broad and insidious influences of inequality that have been discussed in much of the literature (Wilkinson & Pickett, 2010)[1].

Further, in the process of arguing for this pathway the authors seem to conflate inequality with low wealth. The sole citation (Ribeiro et al., 2009)[2] was a paper linking exposure to violence and mental health problems in lower and middle income countries (LAMIC). The paper cited does not mention inequality at all, and LAMIC are merely the context in which the link is examined. The implicit argument appears to be that people in lower income societies experience greater exposure to violence which leads to unhealthy behaviour. While this is not necessarily a contentious notion, it centres on the effects of poverty rather than the effects of inequality. This tendency was also evident in the more structural pathways put forward by the authors. Specifically, the authors proposed that inequality affects health because the poor are less able to afford healthcare or are more likely to live in a location where there are fewer facilities. Again, both pathways are explained in terms of the negative effects of being poor (absolute wealth) rather than inequality (relative wealth).

It is important to note here that we do not suggest that individual wealth, infrastructure, and access to facilities do not affect health, or that they are unrelated to inequality. However, any analysis of inequality that limits itself to those pathways is unlikely to adequately explain the mechanisms at play. Indeed, previous studies which have directly examined the role psychosocial factors (e.g., reduced trust and social cohesion) and structural factors (e.g., health spending and infrastructure) point to the important role that these factors play in explaining the relationship between

inequality and health and well-being outcomes. For instance, these studies have found that the psychosocial factors partially mediate the relationship whereas structural factors do not (Elgar, 2010; Elgar & Aitken, 2011; Layte, 2012)[3][4][5]. In light of this, inequality has been characterised as being primarily a social problem, the consequences of which strengthen and accentuate other causal relationships (Pickett & Wilkinson, 2015)[6]. As such, it is difficult to accept the authors' strong assertion that structural factors explain the observed relationships when psychosocial factors were not properly assessed.

We also note that the reporting of analyses in this paper leaves some questions unanswered. Specifically, although the authors interpret a change in regression coefficients as proving that structural factors mediate the effect of inequality on health, they do not report any specific pathway analyses making this claim difficult to evaluate. Further, on the basis of a positive correlation between inequality and hazardous behaviour, the authors claim to have verified a causal pathway whereby greater inequality leads to reduced health via increases in hazardous behaviour. This seems an overly strong claim to make based on a correlation, and it is hard to understand why they chose to deviate from the method they used when examining the role of structural factors. It is difficult to accept such a strong interpretation when they did not examine inequality, hazardous behaviour, and their data on actual health outcomes as part of the same model.

This study was strong in its examination of a long-term data set, using a combination of cross-sectional and longitudinal data to demonstrate that the adverse effects of inequality on health were also evident in the context of a very dynamic and significant period in Chinese history. However, it is difficult to support the authors' conclusion that structural factors are driving the negative effect of inequality on health.

References

1. ^*Wilkinson, R. G., & Pickett, K.. (2010). The spirit level: Why equality is better for everyone. Penguin Books Limited.*
2. ^*Wagner S. Ribeiro, Sergio B. Andreoli, Cleusa P. Ferri, Martin Prince, et al. (2009).Exposição à violência e problemas de saúde mental em países em desenvolvimento: uma revisão da literatura. Rev. Bras. Psiquiatr., vol. 31 (suppl 2), S49-S57. doi:10.1590/s1516-44462009000600003.*
3. ^*Frank J. Elgar. (2010). Income Inequality, Trust, and Population Health in 33 Countries. Am J Public Health, vol. 100 (11), 2311-2315. doi:10.2105/ajph.2009.189134.*
4. ^*Frank J. Elgar, Nicole Aitken. (2010). Income inequality, trust and homicide in 33 countries. doi:10.1093/eurpub/ckq068.*
5. ^*R. Layte. (2011). The Association Between Income Inequality and Mental Health: Testing Status Anxiety, Social Capital, and Neo-Materialist Explanations. European Sociological Review, vol. 28 (4), 498-511. doi:10.1093/esr/jcr012.*
6. ^*Kate E. Pickett, Richard G. Wilkinson. (2015). Income inequality and health: A causal review. Social Science & Medicine, vol. 128 , 316-326. doi:10.1016/j.socscimed.2014.12.031.*