

Commentary

A Problem with the Individual Approach in the WHO Health Inequality Measurement

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Published: 27 May 2002

Received: 13 May 2002

Accepted: 27 May 2002

International Journal for Equity in Health 2002, 1:2

This article is available from: <http://www.equityhealthj.com/content/1/1/2>

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Abstract

Background: In the *World Health Report 2000*, the World Health Organization made the controversial choice to measure inequality across individuals rather than across groups, the standard in the field. This choice has been widely discussed and criticized.

Discussion: We look at the three questions: (1) is the World Health Organization's health inequality measure value-free as it claims? (2) if it is not, what is the normative position implied by its approach when measuring health inequality? and (3) is the individual approach a logically consistent methodological choice for that normative position?

Summary: We argue that the World Health Organization's health inequality measure is not value-free. If it was, the health inequality information that the measurement collected could not reasonably be included in its ranking of how well national health systems performed. The World Health Organization's normative position can be interpreted as a quite expansive view of justice, in which health distributions that have causes amenable to human intervention are considered to be matters of justice. Our conclusion is that if the World Health Organization's health inequality measure is to be interpreted meaningfully in a policy context, its conceptual underpinning must be re-evaluated.

Introduction

In the *World Health Report 2000*, the World Health Organization (WHO) proposed two principles by which the performance of national health system should be assessed: "goodness, the best attainable average level" and "fairness, the smallest feasible differences among individuals and groups" [1, p. xi]. These two principles are translated into five indicators in its index of national health system's performance, and one of them is the level of health inequality within nations. For this, the WHO made the con-

troverisal choice to measure inequality across individuals rather than across groups, the standard in the field [2,3]. Although the WHO's choice has already been widely discussed and criticized [4-13], we believe there are further important points to make.

We look at the following three questions in this paper. First, is the WHO health inequality measure in fact value-free as it claims? Second, if, as we will argue, it is not, what is the normative position implied by the WHO's approach

when measuring health inequality? Finally, is the individual approach a logically consistent methodological choice for that normative position? Our conclusion is that if the WHO health inequality index is to be interpreted meaningfully in a policy context, the WHO needs to re-evaluate the conceptual underpinning of their measurement.

Discussion

Science and norms: is the WHO health inequality measure value-free?

The main justification the WHO provides for its choice of the individual approach over the group approach is its desire to provide an objective, and therefore scientific measurement. The WHO researchers believe that the group approach to measuring inequality cannot provide a scientific measurement, because the construction of comparison groups inevitably forces us to make normative or causal assumptions. In their view, the group approach "confounds a positive issue, the extent of inequality across individuals, and a normative question: which inequalities are unjust?" If we instead separate "the definition and measurement of inequality from *ex ante* causal hypotheses or normative positions, inequality itself becomes an object of scientific inquiry" [[2], p. 538].¹

We believe this represents a mistaken view about the role normative positions can play in scientific endeavors. Although the WHO is right that it is undesirable to let norms and values color an investigation,² they play a necessary part in deciding what questions to ask. What phenomena we are interested in and what aspects of them we feel are particularly important is a function of our total worldview, which includes our normative views. The group theorist is using her beliefs about what aspects of health inequality are of moral import to decide what questions to ask about the inequality. This does not, however, hinder the investigation itself from being in compliance with the demands of the scientific method.

If, on the other hand, there is no normative significance to a measurement, why, perhaps apart from satisfying some intellectual curiosity, should we care about the results? Some measurements may in fact be value-free in some sense. For example, one could measure the difference in the height of trees in forests. One could then order the forests according to the extent of variation, that is, the inequality, in the height of the trees. While it may be interesting to know the extent of these differences, this measurement can tell us nothing about whether a forest is *better* when there is more or less difference in the height of the trees. If the approach used by the WHO in fact lacks a normative underpinning, it should be analogous to the measurement of forests. If that is the case, however, the health inequality information that the measurement col-

lected cannot reasonably be included in their ranking of how *well* national health systems performed.

Inequalities and inequities: what is the normative position implied by the WHO's approach?

Any judgment as to whether one health distribution is better (or worse) than another requires a normative theory. It is the theory that explains which inequalities are unjust, or, in the terminology of the health inequality literature, which inequalities are inequitable. A common view is that only those inequalities caused by an unfair social system qualify as inequities. In other words, a distribution of some good is a matter of justice only if it is determined by relevant human actions (although this may not be a sufficient condition). Accordingly, this view does not grant that a distribution caused by nature (a natural distribution) is a matter of justice. Since the individual approach cannot provide results that distinguish health inequalities that have natural causes from those that have social causes, the WHO must have a different normative view.

Despite its claim of performing a value-free health inequality measurement, we believe that the WHO in fact provides a particular normative theory that gives relevance to its results. This theory denies that only the inequalities caused by social factors qualify as inequities. For example, the WHO researchers hold that inequalities in health caused by differences in genetic makeup become inequities since we are now in "the era of the human genome project" where various genetic manipulations become increasingly possible [[2], p. 538]. We take this claim to display a belief that the divide between morally relevant and irrelevant causes of inequality is not social vs. natural but whether the causes are susceptible to human intervention or not. On this view, distributions that have causes amenable to human interventions are matters of justice.

This view is echoed in a later paper [[14], p. 538] and the *World Health Report 2000* also seems to endorse it. In the report, the WHO states that a "health system also has the responsibility to try to reduce inequalities by preferentially improving the health of the worse-off, *wherever these inequalities are caused by conditions amenable to intervention*" [[1], p.26, our italics]. We take this to be the considered view of the WHO.³ Since almost all causes of inequalities in health are amenable to human intervention, perhaps with the exception of a random misfortune such as being struck by lightning, this is a very expansive position – it entails that almost all inequalities in health are inequities. On the face of it, this is a normative theory that works fairly well with the individual approach.

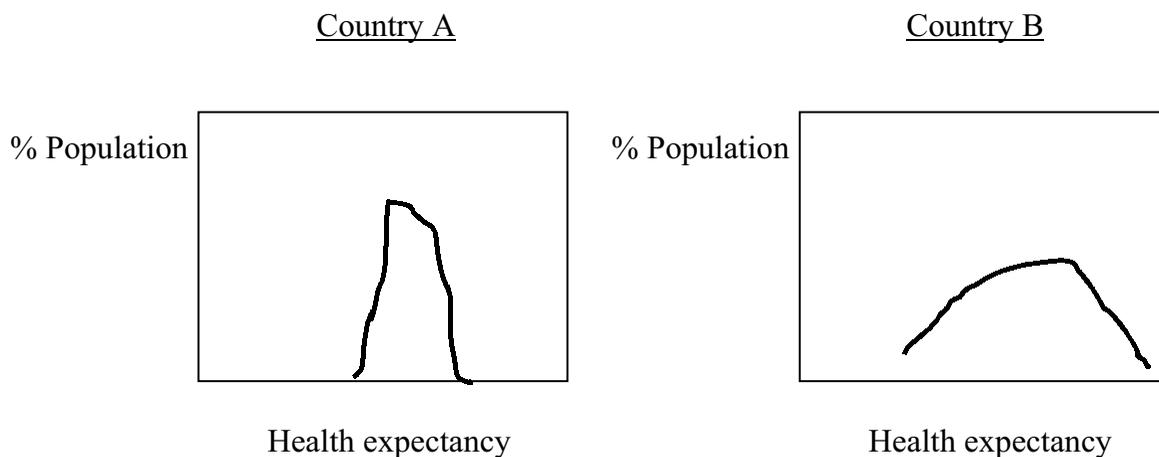


Figure 1
Health distributions at the country level. Distributions of health expectancy for country A and B. The X-axis is health distribution and the y-axis is the percentage of the population. Country B's distribution is more spread than country A's.

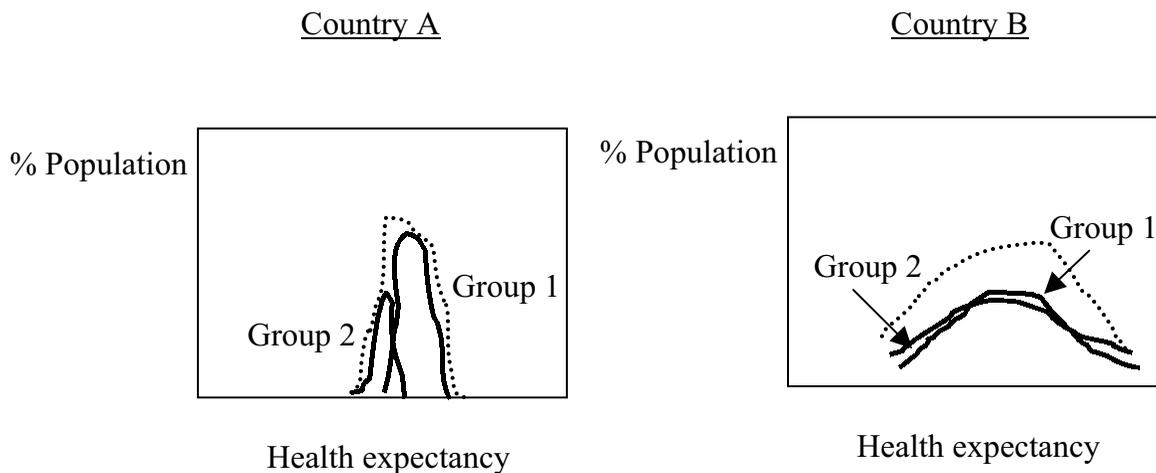


Figure 2
Health distributions at the group level. Distributions of health expectancy for country A and B are broken down to distributions of two groups. Group distributions are much more stratified in country A than B.

Implications of results: is the individual approach a good methodological choice for the WHO's normative position?

It is beyond the scope of this paper to articulate an alternative view about the conditions necessary for an inequality to be an inequity. However, we think it is important to point out that the individual approach to measuring health inequality is likely to obscure commonly recognized inequitable inequalities. In fact, it seems to neglect inequalities that should be considered inequities even on the normative view of the WHO. Consider countries A and B where the distribution of risk is illustrated in Figure 1.

It is likely that on the WHO method, country A would get a better inequality score than country B. But suppose that if we investigated country A a bit closer, we would find a situation like Figure 2. That is, we would find that health is very closely correlated with membership of cultural groups, such that membership in group 1 is correlated with very high health while membership in group 2 is correlated with correspondingly low health. We do not, on the other hand, observe such a difference in terms of group affiliation in Country B.

Suppose further that an important cause of this inequality in country A was systematic discrimination against group 2 by the state. We would then have a situation that would strike most people as patently inequitable. In fact, since such discrimination is amenable to human intervention, the WHO should also find it inequitable. On the national level, however, where the WHO conducts analysis and where the cultural affiliations disappear, the curve looks good. It is clear that the WHO health inequality measure fails to take account of what most would consider injustices. Whether such a health inequality measurement still provides meaningful information would depend on our values of health. It is nonetheless at the moment worth recognizing this problematic consequence of the current method of the WHO.

Conclusions

Although we respect the contributions that the WHO has made by stimulating debate about the concept and measurement of health inequality, we believe it is reasonable to question the particular methodology the organization utilizes. We are concerned that at the very least the individual approach to measuring health inequality is bound to miss some important inequities, inequities that even the normative position the WHO seems to hold should recognize. In order to determine how important this failure might be, we expect further discussion on the value of health and its distribution.

Competing interests

None declared.

Authors' contributions

Both authors, YA and TT, equally contributed to the development of ideas and writing the article through interactive process. Both authors read and approved the final manuscript.

¹And to conclude they write that: "By moving towards the measurement of the distribution of health across individuals, the study of inequality will be put on a sounder scientific footing" (p. 541, Murray et al. 1999).

²With the exception of the values embodied in the scientific method itself of course.

³There is some evidence of a different and incompatible view. At one point they write that since health is a critical component of human well-being, inequality of health must be intrinsically important. This is equivalent to a normative view that holds it to be *unimportant* what kind of causes a distribution has. Instead, what determines whether a distribution of a good is a matter of justice or not is the good's importance as a component of human well-being. In the case of health, regardless of whether an inequality in its distribution is caused by genes, socioeconomic disparity or luck, the inequality qualifies as an inequity. We believe that this is not the considered view of the WHO however.

Acknowledgements

We would like to acknowledge helpful suggestions and comments from Daniel Hausman and Daniel Wikler in the Department of Philosophy in the University of Wisconsin-Madison.

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