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Research into effects of interventions on inequalities must first address measurement issues

Bambra et al.[1] discuss the evidence to date of the way interventions addressing the social determinants of health may affect health inequalities and call for increasing research into the subject. But they say nothing about how health inequalities are to be measured and nothing to suggest a recognition that measurement of inequalities may be problematic.

A general problem with health inequalities research is that it is almost invariably carried out without a recognition of how changes in the overall prevalence of an outcome will tend to affect standard measures of differences between outcome rates. Solely for reasons inherent in the shapes of underlying risk distributions, the rarer an outcome the greater will tend to be relative differences in experiencing it and the smaller will tend to be relative differences in avoiding it. Thus, for example, reducing the prevalence of health-less-than-good will tend to increase relative differences in health-less-than-good while reducing relative differences in health-good-or-better. Absolute differences and odds ratios tend also to change in systematic ways as the overall prevalence of an outcome changes, though in more complicated ways. Roughly, as uncommon outcomes become more common, absolute differences tend to increase; as common outcomes become even more common absolute differences tend to decrease. Differences measured by odds ratios tend to change in the opposite direction of absolute differences.[2,3,4,5] See also the recognition of some of these patterns in references 6-9.

These are merely tendencies, of course, and they may be countered or enhanced by other factors. Interventions regarded as addressing the social determinants of health, because they tend to be directed toward the disadvantaged, may in varying degrees counter the tendency for reductions in adverse outcomes to increase relative differences in experiencing those outcomes and may enhance the tendency for such reductions to reduce relative differences in avoiding the outcomes. The crucial issue in health inequalities research generally is sorting out the changes in any measure that reflect something meaningful from those that are simply the statistically driven consequences of change in the overall prevalence of an outcome. An exploration of the effects of interventions on inequalities raises the same sorts of issues. And it may be necessary to abandon standard measures entirely and instead to employ measures that are unaffected by the overall prevalence of an outcome (such as discussed in reference 5, 10, 11).

But there ought not to be a call for further research into a subject without recognizing the need first to resolve the measurement issues.

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11. Solutions sub-page of Measuring Health Disparities page of jpscanlan.com:
<http://www.jpscanlan.com/measuringhealthdisp/solutions.html> (accessed 19 April 2010).