Commentary: The decline of death—how do we measure and interpret changes in self-reported health across cultures and time?

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A little health now and again is the ailing person’s best remedy.  
[Friedrich Nietzsche (1844–1900)]

Comparing mortality and morbidity between nations and over time is a complex and often frustrating business and the study reported by Kunst et al.  

1 is an impressive achievement. In this commentary I would like to speculate as to how we should react to their findings and how we might interpret them, as well as considering some further questions their findings raise.

Reaction

Profound depression seems appropriate. The findings show that (i) not only do about a third of the citizens of these countries still not feel very healthy (table 3) but (ii) poorer and less educated people are still about 2.5–3.0 times more likely to feel ill than richer, better educated people (tables 5, 7). Wide confidence intervals make precise interpretation difficult, but the less rigid confines of a commentary allow the candid observation that the study provides some evidence of worsening inequality within several of the countries.

This (perhaps worsening, certainly persistent) inequality, and persistent poor self-reported health coincided with GDP growth in all of the countries studied (with the exception of Finland between 1990 and 1995).  

2 The Fraser Institute produces a measure of Human Progress which combines indicators of economic, health, educational, and technological development among 128 countries in the world.  

3 The countries included in this study were in the top five of that index when measured in 2001. Advances in medicine also continued apace through-out this time period. These countries are getting richer, their residents are living longer and their doctors are better at curing ailments than at any other time in history. Why do so many continue to feel so unwell, and why is the gap between rich and poor, educated and less educated, still growing?

Interpretation

Studies which show these kinds of socioeconomic inequalities in health are now so common that it is easy to become numb to their real meaning. That makes it worth thinking them through afresh. Upward socioeconomic mobility is comparatively limited in these countries and from that perspective the findings suggest that circumstances of birth and schooling continue to be a heavy influence on whether people enjoy feeling well, or feel unwell, in their adult lives. None of us has control over where and to whom we are born; it is a genuine lottery. Those who fair better in that ‘birth-based opportunity lottery’ start off wealthier and on an easier trajectory from the beginning of their lives. We all also participate in a second lottery; our genetic inheritance. Here, the outcome can push us towards or away from particular illnesses. Both the genetic and the birth-based opportunity lotteries have the potential to ease our journey through life and health, or to massively increase the chances of a rough passage, laden with suffering.

Yet, whilst medical science strives for, and continues to succeed in developing, the means to equalize the consequences of the genetic lottery through drug therapies, surgery and maybe even pharmacogenetics,  

4 wider society continues to largely ignore, or fail to tackle, the consequences of the birth-based opportunity lottery. While those with certain genetically based conditions or pre-dispositions enjoy the prospect of early warning, treatment, and even a cure as medicine advances, many of those born into and living in relative poverty will grow old, grow ill and die in the same relatively adverse situation. Of course, some efforts have been made to equalize the effects of the birth-based opportunity lottery, with state benefits and minimum wage levels. However, there is a discernable inequality in efforts to address the consequences of our genetic and socioeconomic inheritance and their success.

Further questions

A great deal of work on inequalities in health at a population level has used mortality as the outcome measure. Death has an obvious advantage over morbidity in that we can be more certain that poor health of some kind was usually involved! The dead do not ‘somatize’ their status in response to comparisons with others around them, or their own health expectations . . . However, if—as life expectancy rises and mortality rates fall—we are witnessing the gradual decline of (premature) death among the more affluent European nations, questions about how we continue to monitor and interpret trends in health among them are inevitably raised.

There is a large body of work which supports the validity of self-assessed health. People who report poor health are more likely to need healthcare and to die. However, the relationship between self-assessed health and mortality changes over time, and differs between cultures.  

5–8 Studies show that self-reports of poor health are influenced by physical condition, expectation, and comparison. The latter two contributors are fluid through time and may be culturally determined. Thus, the
role of culture and expectation must be accounted for when interpreting findings of the kind presented by Kunst and colleagues. This point can be illustrated with an example.

Figure 1 shows the relationship between male life expectancy at birth, and prevalence of self-reported limiting long-term illness (LLTI) from the UK decennial censuses in 1991 and 2001. The points on the graphs are Local Authority areas (LA), drawn in proportion to population size. The nation of origin for each LA (England, Scotland, and Wales) has been distinguished by shading. Both figures show a clear relationship such that areas with higher rates of LLTI tend to have lower life expectancy.

Looking more closely, the 1991 graph shows a different relationship between the prevalence of self-reported illness and life expectancy in each country. In general, for a given level of self-reported illness, the Scots have a lower life expectancy and the Welsh a higher life expectancy than the English. These countries are geographically proximate, share social and economic characteristics, government (at the time of data collection) and a national health service. Yet, to put it crudely, the Scots are more likely not to report how sick they really are, and the Welsh to report higher rates of sickness, but to live longer.

In the graph for 2001, two important things have changed. First, note the general increase in the prevalence of self-reported limiting long-term illness, despite the rise in average life expectancy (these are discernable from the axes on the graphs). Second, note the change in the between-country difference in the illness/life expectancy relationship. The Scots and Welsh are no longer so very different from the English (though they are still distinct from each other). In just 10 years, quite a different relationship between illness and death has been established within and between these countries. It seems more likely that this shift is explained by a change in the likelihood and meaning of reporting illness, than in the implications of morbidity for mortality per se.

My point here is not to suggest that the socioeconomic inequalities of the kind demonstrated and tracked by Kunst et al. might be explained by cultural differences in reporting illness between rich and poor within a country. In fact, the evidence is that any cultural difference between rich and poor in their reporting of illness is likely to underestimate inequalities when...
compared to a clinical assessment.\textsuperscript{10} Rather, I am interested in how and whether we can compare self-reported measures of illness between countries and cultures and, more importantly, how we track these over time when cultures, expectations, and awareness of health are all in a state of flux.

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