

Societal transition and health



The fall of communism in the 1990s and the ensuing profound societal transition in central and eastern Europe and the former Soviet Union is a unique social experiment. Social, economic, and political changes affected all aspects of people's lives, which resulted in changes in mortality, morbidity, and fertility rates.¹ The experiment offers a rare opportunity to investigate societal factors that drive the health of a population.

Although many studies have described these changes, the mechanisms of how societal change affects health remain grossly under-researched. Explanations pursued so far fall into two categories: biomedical (proximal) and social (upstream). Among proximal factors, alcohol has received most attention. Upstream factors, which arguably are the primary drivers of population health, have been investigated less vigorously, possibly because they are much harder to study than others. Two major issues affect the study of factors at the societal level: measurement and confounding.

We thus welcome the study, in *The Lancet* today, by David Stuckler and colleagues² because they focus on upstream factors, particularly mass privatisation, and tackle the difficulties of measurement and confounding. First, the report puts into practice the notion of social transition, which then allowed measurement of factors that can serve as proxies of societal change. And second, by taking advantage of the societal transition in eastern Europe and by pooling within-country time-series analyses, the investigators tried to control for differences both between countries and over time (ie, controlled for confounding).

Stuckler and colleagues argue convincingly that the speed of privatisation was an important determinant of mortality changes in the transition in central and eastern Europe and former Soviet Union. This finding is indirectly supported by evidence that the rise in mortality was highest in individuals with low education and in regions with high social stress.³⁻⁷ In other words, in populations vulnerable to loss of employment. They provide an important clue about what happened in these regions, but for any one study to exclude the effect of other aspects of the transition is difficult. In addition to confounding, there is also the issue of effect modification. As the investigators noted, rapid social changes took place in all countries in these regions but

only some of the countries experienced a profound mortality crisis. The effect of rapid social changes, such as mass privatisation, was probably modified by other factors. Several candidates exist for such effect-modifying variables, of which we give four examples.

First, the countries most affected by the transition (in terms of fall in both the gross domestic product and life expectancy) started, economically, from a lower baseline than countries that were less affected. Additionally, the fall in life expectancy was most striking in countries with the steepest increase in income inequality.⁸ At low baseline levels of gross domestic product, and at a time of rapid increase of material inequalities, it is easy to fall into poverty (and suffer its consequences).

Second, some populations seem to be more vulnerable to societal changes than others. For example, mortality rates in the former Soviet Union seemed prone to considerable fluctuations even before the transition. This fluctuation might partly indicate the historically poor health status of some populations. For instance,

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Unemployed Russians queue for food handouts outside a Moscow railway station (September, 1998)

Reuters

Russian life expectancy at birth in 1935 (not a year of famine) was 40 years (both sexes combined),⁹ compared with 62 years in the UK.

Third, both the poor health status and the apparent vulnerability to mortality shocks in some populations might indicate the accumulation of disadvantage and risk over a lifetime. For example, poor health in Russian men and women reflects not only current social status but is also influenced by disadvantage in childhood and young adulthood.¹⁰

Fourth, governmental response might also have a role. When faced with rapid rises in mortality due to crises from transition, epidemics, and famines, governments respond differently: some with determination, some with neglect. Arguably, in post-communist countries most affected by transition, both policy response (Popov V, New Economic School, Moscow, Russia, personal communication) and management of transition were poor.¹¹

Even with the use of an ingenious design, such as that adopted by Stuckler and colleagues, pre-existing societal characteristics cannot be taken into account. This flaw is not a criticism, but rather an illustration of the difficulties faced by investigators who wish to disentangle the effects of different factors that act at the societal level.

With all the caveats, Stuckler and colleagues' study is relevant beyond eastern Europe. Countries in other regions are, and have been, undergoing economic and social transitions.¹² That the extent and speed of

such changes are important is increasingly apparent. Additionally, however, the social and health effect of transition depend on specific historical and political contexts.

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We declare that we have no conflict of interest.

- 1 UNICEF. A decade of transition: regional monitoring report no 8. Florence: IRC, 2001.
- 2 Stuckler D, King L, McKee M. Mass privatisation and the post-communist mortality crisis: a cross-national analysis. *Lancet* 2009; published online Jan 15. DOI:10.1016/S0140-6736(09)60005-2.
- 3 Shkolnikov V, Leon DA, Adamets S, Andreev E, Deev A. Educational level and adult mortality in Russia: an analysis of routine data 1979 to 1994. *Soc Sci Med* 1998; **47**: 357–69.
- 4 Murphy M, Bobak M, Nicholson A, Rose R, Marmot M. The widening gap in mortality by educational level in the Russian Federation, 1980–2001. *Am J Public Health* 2006; **96**: 1293–99.
- 5 Leinsalu M, Vagero D, Kunst A. Estonia 1989–2000: enormous increase in mortality differences by education. *Int J Epidemiol* 2003; **32**: 1081–87.
- 6 Jozan P, Forster DP. Social inequalities and health: ecological study of mortality in Budapest, 1980–83 and 1990–93. *BMJ* 1999; **318**: 914–15.
- 7 Cornia GA. Labour market shocks, psychosocial stress and the transition's mortality crisis: research in progress 4 working paper. Helsinki: UNU/WIDER, 1997.
- 8 Marmot M, Bobak M. International comparators and poverty and health in Europe. *BMJ* 2000; **321**: 1124–28.
- 9 Haynes M, Husain R. A century of state murder? Death and policy in twentieth-century Russia. London: Pluto Press, 2003.
- 10 Nicholson A, Bobak M, Murphy M, Rose R, Marmot M. Socio-economic influences on self-rated health in Russian men and women: a life course approach. *Soc Sci Med* 2005; **61**: 2345–54.
- 11 Klein LR, Pomer M, eds. The new Russia: transition gone awry. Stanford: Stanford University Press, 2001.
- 12 Cornia GA, Panizza R, eds. The mortality crisis in transitional economies. New York: Oxford University Press, 2000.