

Factors associated with gender differentials in Self-reported Health and Activities of Daily Living in the former communist countries of Central and Eastern Europe and the former Soviet Union.

Martin Bobak (UCL International Institute for Society and Health, University College London, UK)

Mike Murphy (Department of Social Policy, London School of Economics and Political Science, UK)

Richard Rose (Centre for the Study of Public Policy, University of Aberdeen, UK)

Michael Marmot (UCL International Institute for Society and Health, University College London, UK)

Summary

The former communist countries in Europe have undergone profound social and economic transformation, and they exhibit a wide variety of social and economic conditions. While considerable attention has been given to the excess mortality of working age males, especially in Russia, less attention has been given to health status, and the health status of women in particular.

The data used come from the 2004 round of the New Europe Barometer surveys, a series of population surveys in the former communist countries with primary focus on political and social attitudes (www.abdn.ac.uk/cspp) covering 13 countries of Central and Eastern Europe and the former Soviet Union (Belarus, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovakia, Slovenia, Ukraine, N=15,331 respondents). Data were collected by structured questionnaires completed during interviews in subjects' homes. The questionnaires contained identical questions on the variables of interest, and correct wording was checked by translating questions back into English. In all countries, subjects were asked an identical series of questions on self-rated physical and emotional health, and 10 indicators of ADL functioning such as ability to walk, lift, bathe etc. The possible responses to the self-reported health questions were: 'very good', 'good', 'average', 'bad' and 'very bad', and to the ADL ones 'not limited', 'very limited' or 'somewhat limited'. The health variables was dichotomised by combining the responses 'bad' and 'very bad' into "poor health", responses 'very good', 'good' and 'average' were considered as indicating "good health"; for ADL measures, 'somewhat' or 'very limited' were combined into "limited". It is acknowledged that there are problems with making cross-national comparisons (Sadana et al, 2002), but we believe that differences between groups within countries should be less subject to this problem, since fixed country-specific influences will be largely removed by such differencing and therefore comparisons between countries will be more valid.

We constructed the estimated proportion of life spent in poor health and limited between ages 20 to 75 by men and women on each of these 12 indicators using national life tables obtained from the WHO set of national life tables (<http://www.who.int/healthinfo/bodlifeexpectancy/en/index.html>), giving a total 312 indicators of health status. We then calculated the differences of values for women and men giving 156 indicators.

We find marked differences among participating countries in proportion of lifetime spent in poor health (at least 2-fold between the best and the worst in most cases). In general, the countries of the former Soviet Union, such as Russia, Ukraine and Belarus, tend to have the worst health status across all indicators, and countries such as Slovenia and the Czech Republic the best health for both men and women.

In order to assess the macro-level factors associated with differences between men and women, we used a number of macro-level variables such as gross domestic product per capita (GDP) adjusted for purchasing power parity (>3-fold), the Gini coefficient of income inequality (2-fold), Transparency International Corruption index (2-fold), homicide rates (20-fold), and indicators of overall mortality such as life

expectancy at age 15. The selection of societal characteristics as potential predictors of health was based on availability of data and previous research. Since much of the literature is related to income inequality, we used the Gini coefficient. We also used national homicide rates, since they indicate levels of crime, considered by some as an indicator of social capital. Corruption is a societal indicator of adherence to legal norms in public offices and institutions, and has been linked to governance and social capital. Finally, we included markers of economic prosperity, since this might be expected to be associated with health differentials (although whether this holds for gender differences is a more open issue).

Most societal indicators were taken from external sources. Recent estimates of gross domestic product (GDP) adjusted for purchasing power parity (PPP) in 2004, and the Gini coefficient of income inequality in 2004 were obtained from the TransMONEE database (www.unicef-icdc.org/resources/transmonee.html). The Corruption Perception Index, based on expert rating and published by Transparency International, ranks countries in terms of the degree to which corruption is perceived to exist among public officials and politicians (www.transparency.org). For each country, the index estimates levels of corruption on a scale from 0 to 10. National rates of homicide and life expectancy at birth and at age 15 (to compare rates of self-rated health with objective outcomes) were taken from the WHO Health for All database (www.who.dk/hfadb).

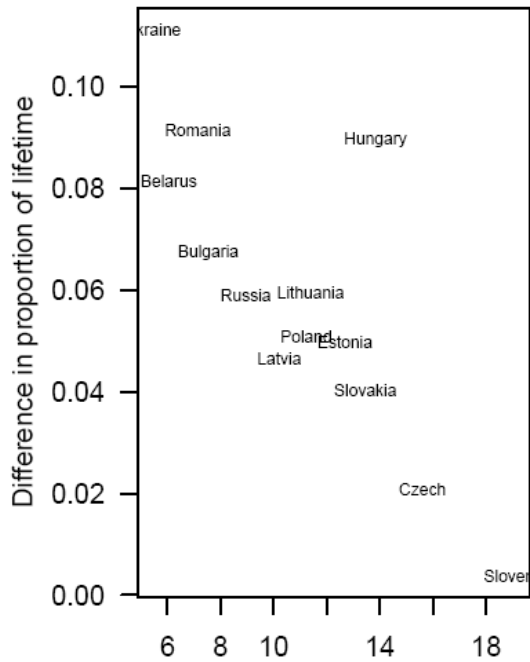
In almost all cases, women report worse health than men do, 155 out of 156 cases. The largest differentials were found in countries with the largest overall values (we also looked at ratios of female to male values which confirm that these results were not explained by higher values for both men and women leading to higher differences). We find that among societal (country-level) measures examined, indicators of economic and educational status as well as corruption were strongly associated with gender health differentials (with the most advantaged countries having the smallest differentials) – for example, the correlation coefficient for self-reported physical and mental health and GDP per capita were -0.7 and -0.5 respectively; the corresponding values of national differences with Corruption index (for which higher values represent higher level of corruption), were 0.6 and 0.4 respectively (see Chart). Similar associations were found with most ADL measures. The relationships with inequality as measured by the Gini coefficient and homicide rates were non-significant in most cases.

Societal measures of prosperity **and** corruption, but not income inequalities were associated with health. GDP was consistently inversely associated with health. This is not surprising, given the grave economic problems of some of the participating countries. It is possible that, at least among the countries with low income, material deprivation is the most important social influence on health. While the former communist countries are not developing countries, most of them fall in the category of “middle income” countries, rather than high income countries where most studies of income distribution have been conducted so far. The experience in Eastern European countries is substantially different from that in Western European ones.

Reference

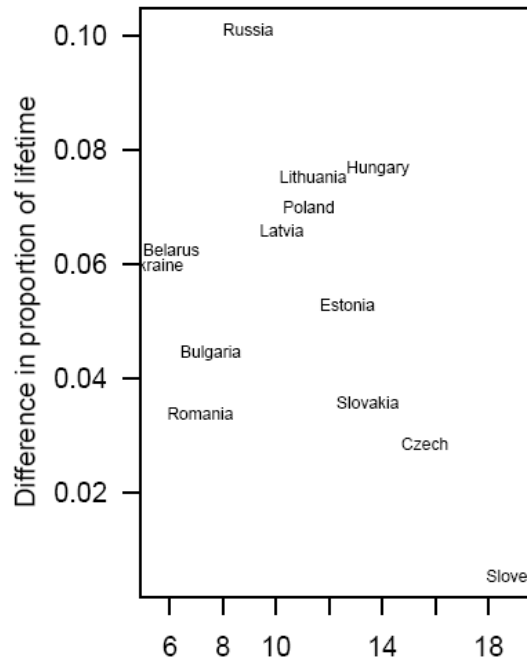
Sadana R, Mathers CD, Lopez AD, Murray CJL & Iburg KM (2002) Chapter 8.1: Comparative analyses of more than 50 household surveys on health status, in Murray CJL, Salomon JA, Mathers CD & Lopez AD (eds) Summary Measures of Population Health Concepts, Ethics, Measurement and Applications. pp. 369-386. World Health Organization: Geneva.

Self-assessed physical health in last year vs. GDP; $r = -0.81$



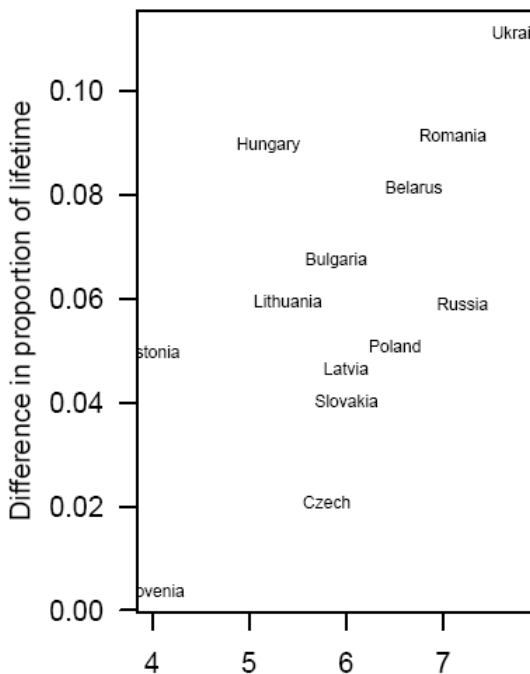
(000s \$ppp)
Difference Females-Males; ages 20-75

Self assessed emotional health in last year vs. GDP; $r = -0.46$



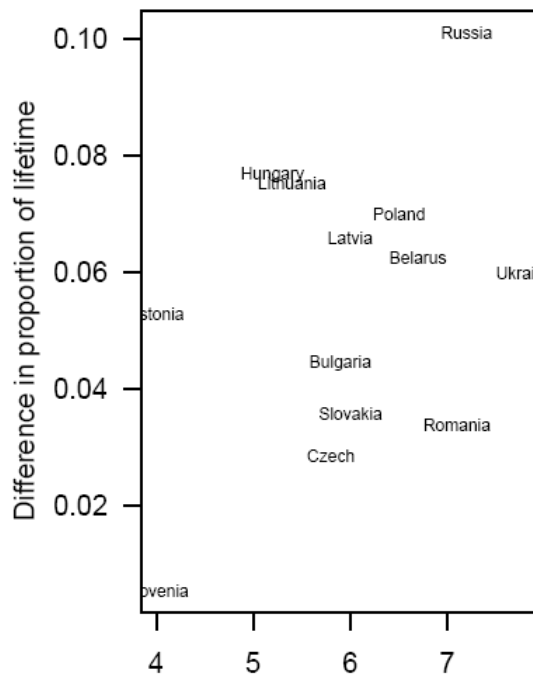
(000s \$ppp)
Difference Females-Males; ages 20-75

Self-assessed physical health in last year vs. Corruption; $r = 0.62$



Corruption index
Difference Females-Males; ages 20-75

Self assessed emotional health in last year vs. Corruption; $r = 0.39$



Corruption index
Difference Females-Males; ages 20-75