

Russia needs to look beyond longevity



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In the middle of last century, life expectancy at birth in Russia was similar to that of other European countries. However, from 1964, it slowly declined, with male life expectancy falling by 7.5 years to the nadir of 57.4 years in 1994 after the collapse of the Soviet Union (with an equivalent decrease of 2.3 years in women to 71.1 years). After a slow restoration to the year 2005, life expectancy is increasing at an unprecedented pace of 0.82 years per year, reaching 67.5 years for men and 77.6 years for women in 2017. Pessimists might say that this is just a rebound effect, restoring previous loss rather than indicating continued growth. This question was addressed in a study¹ in 2014, where the authors cautiously concluded that the increase in Russian life expectancy is a result of the national project to address health care and other state measures. Some of the same authors are now asking whether the current life expectancy in Russia is consistent with the country's wealth.²

This question was somewhat addressed by the Global Burden of Disease study,³ where Russia was found to have very low life expectancy at birth compared with the value predicted by the Socio-Demographic Index. In *The Lancet Public Health*, Vladimir Shkolnikov and colleagues use a simpler index of development: the wealth of a country, as measured by the gross domestic product per capita in US dollars corrected by purchasing power parity (GDP [PPP]). The authors used 2014–15 data from a group of countries to generate a Preston curve expressing the relationship between mortality and national wealth. The 61 countries included in the model were not selected randomly from around the world but chosen according to availability of good-quality data. When plotted next to the Preston curve generated with these countries, with GDP (PPP) on the horizontal axis and life expectancy on the vertical axis, the countries are quite scattered. The 2015 estimate of Russian life expectancy, placing Russia is 6.5 years below the predicted life expectancy, is approximate. If a confidence interval were provided around the regression line, it is possible that Russia's line of progress would not lie far from it.

Another problem with this estimate of life expectancy gaps is that what are essentially longitudinal data from Russia are compared with single time values from the

set of 61 countries—ie, with cross-sectional (ecological) data. Russia is seen to be progressing below the values of life expectancy typical of the countries with similar GDP (PPP). However, other countries also find themselves a large distance from the Preston curve. For example, if plotted longitudinally, the USA would lie below the curve whereas Japan would fly high above it. The authors conclude that between 2005 and 2015, Russia's life expectancy gap was reduced by 25%, as measured by the vertical distance from the Preston curve. However, such a measurement is tricky and approximate. Rather than considering the change in vertical distance alone and instead looking at the horizontal progression in GDP (PPP) as well, it could be said that the Russian life expectancy curve maintains a similar distance from the Preston curve through time.

Shkolnikov and colleagues also considered the life expectancy of the inhabitants of Moscow, which has higher GDP (PPP) than Russia as a whole, and found, in agreement with Preston curve, that Muscovites live longer than the Russian average. Furthermore, their decomposition of causes of death in Russia supports the hypothesis that Russia is making progress in its struggle with the major cause of death: cardiovascular mortality. Some of the authors have previously suggested that Russia was just starting the period of cardiovascular revolution—ie, reduction of cardiovascular mortality by effective preventive and treatment strategies.¹ This conclusion is rightly cautious because the Russian national mortality data might have been manipulated by reclassifying cardiovascular deaths as deaths from other causes.⁴ There are other reasons to be sceptical about the future of the recent steep increase in Russian life expectancy. In adulthood—eg, at age 35 years—Russian life expectancy has not improved substantially since the beginning of the 20th century. This result means that although Russia went through the epidemiological transition in mid-20th century,⁵ progress in the prevention and management of chronic conditions has been weak.

The noble objective of increasing the longevity of Russian people has been a state policy for the past 18 years. When re-elected president in 2018, Vladimir Putin declared the target as having a life expectancy at birth for both sexes of 76 years in 2024 and 80 in

2030.⁶ Funding of health care as a proportion of GDP has remained below the international standards; however, the Russian Government are now reallocating resources to improve cardiovascular and cancer care.

Shkolnikov and colleagues rightly conclude that high Russian mortality is not the consequence of poverty, but of other causes, including the disproportionately insufficient funding of the health-care service. Notably, after a decline in health-care funding during the 1990s, by 2006, health-care funding had increased to the same level it had been at in 1991, which at the time had been considered catastrophically low and insufficient. Since then, limited additional funding has been poured into special programmes such as construction, leaving health care on the verge of scarcity. Unfortunately, problems go far beyond health-care funding. Prevalence of depression and suicide in Russia is very high.⁷ The high levels of alcohol-related mortality might actually be a reflection of the prevalent unhealthy lifestyle and disappointment in life. Environment is also an important issue. In recent years, the Russian Government has relaxed the standards of air quality, thus reducing the number of people formally classified as living in formaldehyde-contaminated places from 50 million to 20 million.⁸ Increases in HIV incidence and mortality are enormous and add more discontent to the vision of the future for Russian people.

The increase in life expectancy in Russia is notable but insufficient. Certainly, Russians want to live longer but reallocating funds to cardiovascular or cancer care

is not enough. Health-care reform is needed, alongside changes in the sociodeterminants of health in the lives of Russian citizens, as was needed 30 years ago.

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I declare no competing interests.

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