## Education and health over time in Russia:

## Evidence from the RLMS

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## Abstract

Historically, returns to education have been measured mostly in terms of life-time earnings. However, one would expect that there are other benefits associated to getting more education. In that line, Oreopoulos and Salvanes (2011) go beyond the standard models that measure returns to education, by including non-pecuniary benefits such as improved health or job satisfaction. In our paper, we focus in the benefits of education on different dimensions of health, both physical and mental. The main research question of our study is: how does the relationship between education and health change over the life cycle of individuals and across different cohorts?

Our paper adapts the strategies used in Leopold and Leopold (2018) and Kaestner et al. (2020), who have studied similar research questions in different contexts. We exploit the panel features of the Russian Longitudinal Monitoring Survey (RLMS) dataset to address the different patterns that follow the health of individuals from different cohort, as they grow older. We use different measures of health to answer our research question. Among them: self-rated health (SRH), mental health and some chronic diseases. In this way, we can compare some *objective* health indicators, such as those diagnosed by a doctor, with more *subjective* indicators, as how individuals feel themselves. Both types of indicators are complementary to each other and can offer a richer view of overall health. In our main analysis, we use data for health outcomes observed between 2010 and 2019.

In our study, we divide individuals into three different cohorts. The Soviet cohort, comprised by individuals who were born before 1965 and were

educated during Soviet times. The *Transition cohort*, where we include individuals born between 1965 and 1979 and were eligible for higher education (in terms of age) either at the end of the Soviet period or at the beginning of the post-Soviet era. Finally, the *post-Soviet cohort*, of individuals who were born between 1980 and 1990 and were eligible for higher education from the end of the 1990s onwards.

Our preliminary findings show the following. First, in line with previous research, there are no large differences in health when comparing the transition cohort with the post-Soviet cohort, possibly due to individuals in both groups still being under 50 years old throughout the study. When looking at the Soviet and the post-Soviet cohorts, we find some statistically significant differences in poor self-rated health within- and between-cohorts. In particular, individuals who have completed higher education from the Soviet cohort have a better health than those without higher education, but we do not find significant differences within the post-Soviet cohort, when comparing individuals with or without higher education. Also in line with previous research, when looking at mental health, age does not make an important difference in health.

We make two contributions to the literature. First, we add more evidence on the relationship between education and mental health in Russia, a context where this topic has scarcely been studied. A previous study that considers mental health is Rose (2000). Using data from the 1998 New Russia Barometer survey, it finds that human capital explains a substantial amount of variation of both physical and mental health.

The second gap that we attempt to close is mentioned in the meta-analysis

by Hamad et al. (2018), who find that there is a limited number of studies which address non-cardiovascular health outcomes (other than fertility). In particular, they show that self-rated health has been scarcely studied at all outside the U.S. and European countries.

A further step of our study is to see whether implementing a KLS estimator (see Kiviet (2020)), which can provide a range of plausible values without the need of an excluded instrument, confirms the robustness of our current findings.

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