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Regional inequalities in self-rated health in Russia: What is the role of social and economic capital?

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ABSTRACT

Using the data from the European Social Survey (round 6, 2012), this article studies regional inequalities in self-rated health in Russia and examines the role that socio-demographic factors and economic and social capital play in these differences. Also, the regional variation in the determinants of self-rated health is analysed. The article argues that there are considerable and statistically significant unadjusted differences in self-rated health across Russian Federal Districts. We elaborated these differences by regression adjustments, with the result that some of the differences were explained by our predictors and some were amplified. The odds for good self-rated health were lower in the Volga than in Central Russia due to age and socio-economic composition. In contrast, the regression adjustments amplified the differences of the Northwest and the South in comparison to the Central District. The odds for good self-rated health were considerably lower in the Far Eastern part of the country than in the Central District, independently of the adjustments. While social and economic capital predicted good self-rated health at the individual level, they did not explain regional differences. Interaction analyses revealed regional variation in some of the determinants of self-rated health. Most notably, the effects of age, trade union membership and volunteering depended on the regional context. This article argues that the healthcare reforms that transfer funding responsibilities to regional administration may be dangerous for the already less affluent and less healthy rural regions. Thus, regional governance has a growing importance in preventing increases in health inequalities.

1. Introduction

Russian public health deteriorated dramatically after the collapse of the Soviet Union. One of the clearest indicators of the Russian public health crisis was declining life expectancy, especially of men. During the late Soviet period, public health had started to improve, but along with the collapse of the Soviet state, life expectancy decreased by over five years between 1990 and 1994 (Walberg et al., 1998; Rose, 2009, 85). The high mortality of Russians has been associated with cardiovascular diseases resulting from unhealthy lifestyles, such as alcohol abuse, smoking, lack of exercise and high fat diets, as well as from inefficient health policies (Cockerham, 2000, 1313; Men et al., 2003; Carlson and Hoffmann, 2011). Cockerham (2000) associates the high mortality of Russians partly with the change in health governance: the state's responsibility and control over public health drastically decreased, while individual-level health practices were not well developed.

After a long decline, life expectancy in Russia has increased since 2004 (Carlson and Hoffmann, 2011; Shkolnikov et al., 2013; Grigoriev et al., 2014) and it has recovered to around the levels of the late Soviet Union: 65.1 years for men and 76.3 years for women (OECD, 2015). Grigoriev et al. (2014, 125) argue that the recent decline in Russian mortality results from behavioural changes, such as improvements in diet and decreases in alcohol consumption, as well as from better implementation of health policies and improvements in economic conditions.

Russia, the world's largest country, stretching from Europe to Asia, is a federative state in which regions have autonomous jurisdiction over their internal political, economic and social affairs and over regional budgets. According to Fedorov (2002), regional inequalities and polarisation are serious policy concerns in post-Soviet Russia. Russia's transition to a market economy has led to growing regional inequalities: the areas with material and human

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assets have grown, while poor areas have become even more deprived (Fedorov, 2002; Lane, 2013; Remington, 2011). Consequently, the fall in life expectancy did not affect all parts of the country equally (Walberg et al., 1998). More recently, Grigoriev et al. (2014) have argued that the ongoing cuts in healthcare expenditure especially affect the already less affluent regions, and so contribute to growing regional inequalities.

Thus, even if life expectancy has returned to the level of the late Soviet Union, economic and social inequalities as well as regional differences in the standard of living have grown. In this article, we aim to analyse contemporary Russian health inequalities through the lens of regional differences. We approach health empirically with the concept of self-rated health, which is generally considered a relatively valid and reliable measure of general health status (Lundberg and Manderbacka, 1996; Burström and Fredlund, 2001; Heistaro et al., 2001; Jylhä, 2009). Self-rated health is on average worse in the former communist countries than in Western Europe (Carlson, 1998) and worse in Russia than in the post-communist new EU member states (Rose, 2009, 90).

There are several studies on self-rated health in Russia from the early transition period (Bobak et al., 1998, 2000; Kennedy et al., 1998; Rose, 2000). Most of the more recent studies approach Russian public health from the point of view of socio-demographic determinants, informal social structures and perceived control over life (Bobak et al., 1998, 2000; Carlson, 2004; Nicholson et al., 2005; Perlman and Bobak, 2008; Rojas and Carlson, 2006; Vågerö and Kislitsyna, 2005). Economic satisfaction has been shown to be a powerful predictor of self-rated health in both in eastern and western parts of Europe (Carlson, 1998, 2004) as well as in Russia (Rojas and Carlson, 2006). Furthermore, research results indicate that social capital, in the form of trust, social networks and participation in civic activities, plays a role in self-rated health (Carlson, 2004, 2015; Ferlander and Mäkinen, 2009; Rose, 2000; Rojas and Carlson, 2006) and in the Russian 'mortality crisis' in general (Kennedy et al., 1998).

Most of the earlier studies concentrate on cities where survey data is available, such as Moscow (Ferlander and Mäkinen, 2009) or Taganrog (Rojas and Carlson, 2006; Vågerö and Kislitsyna, 2005) or on international comparisons (Carlson, 1998, 2004; Heistaro et al., 2001; Vuorisalmi et al., 2008; Carlson, 2015), while contextual analyses in Russia are few. Regional health differences in the early transition period have been addressed by Walberg et al. (1998), Kennedy et al. (1998) and Carlson (2005). Walberg et al. (1998) used data from 52 regions of European Russia to study how socio-economic change was associated with the decline in life expectancy in Russia between 1990 and 1994. They found that the fall in life expectancy varied across different regions: the largest falls were found in predominantly urban regions, which had high rates of labour turnover, a higher on average but unequal distribution of household income and large increases in recorded crime. Thus, the fall in life expectancy cannot be due to economic impoverishment alone; instead, the impact of social and economic transition, together with a lack of social cohesion, contributed to deteriorating public health. In line with this interpretation, Kennedy et al. (1998) found in their ecological analysis of 40 Russian regions that the regional variations in mortality and life expectancy were partly associated with social capital. Using electoral district data from 1998 from randomly selected districts, Carlson (2005) investigated income distribution in Russian regions and its impact on self-rated health and found that regional income inequality predicts self-rated health, but only for men.

The existing literature does not sufficiently elucidate the contemporary Russian regional reality, since it does not cover the entire country and since a number of important societal changes have taken place in the 2000s, rendering older evidence less pertinent. The interregional income inequalities increased during the early 2000s (Remington, 2011) and regional governance has been reorganised by the Presidential Decree of 2000, which created the new Federal Districts and centralised political control (Petrov, 2002). In the 2000s, the state strengthened its control over civic and political activities, which weakened civil society. The global economic crisis has had an impact on Russia's economy and changed the conditions for health and well-being. Hence, contemporary regional inequalities in public health remain unexplored. Our study contributes to this subject with the help of an up-to-date dataset and a theoretically advanced approach to social and economic capital.

By using a high-quality survey dataset (ESS, 2012) on the entire country from the year 2012, we studied the regional variation in self-rated health across the Federal Districts in this new economic and political order. Consistent with earlier research (Kennedy et al., 1998; Kawachi et al., 1999; Carlson, 2005, 2015; Ahnquist et al., 2012), our study examines the role of economic and social capital in contextual health inequalities. Our analytical strategy focuses on concrete regions instead of general trends. We also discuss contextual explanations for health inequalities with the help of the Russian Federal State Statistics Service's regional statistical data (Rosstat, 2014). Furthermore, we explore the possibility that the determinants of health may differ from one region to another.

Following this, our research questions are:

1) Are there regional differences in self-rated health in contemporary Russia?
2) If yes, are these differences explained by the socio-demographic composition of the regions?
3) Do the determinants of self-rated health differ in different regions? If yes, how?

The empirical section of our study proceeds as follows. First, we study the unadjusted regional differences in self-rated health. Then we control for the socio-demographic composition of the regions to see whether it explains these unadjusted differences. After this, we investigate by interaction analyses whether there is regional variation in the determinants of self-rated health. Finally, we use the Russian register data to theoretically understand the adjusted contextual differences.

In Section 2, we present the theoretical and empirical background of social and economic capital as predictors of self-rated health, a conceptual approach that we use to design our study. Data, indicators and methods are introduced in the third section, followed by the empirical results (Section 4). The last part of the text discusses the findings' theoretical and practical implications and gives suggestions for future research.

2. Social and economic capital in the contextual analysis of health

The key notion in the contextual analysis of health is that of *contextual effect*, which refers to the impact that the context (e.g. residential environment) may have on health. The factors that may bring about contextual health effects include spatial patterns in physical and biological risk factors, relevant services, socio-cultural factors and labour markets (Macintyre et al., 1993; Curtis and Jones, 1998; Kawachi et al., 1999). Our approach draws on the tradition of studies that examine contextual health effects from a socio-cultural point of view, most often conceptualised in terms of social capital. Possible pathways for the contextual social capital to impact health include the diffusion of health information, the adoption of norms relevant to health, social control over behaviour, affective support and collective capacity to defend local amenities (Kawachi et al.,