National Research University Higher School of Economics

*International Conference*

*«DEMOGRAPHIC TRENDS IN RUSSIA: LEGACY OF THE SOVIET ERA OR A NEW TENDENCY?»*

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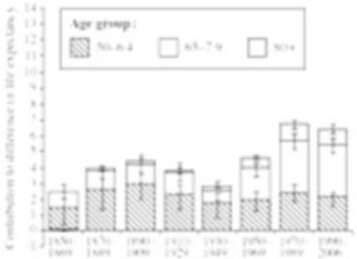
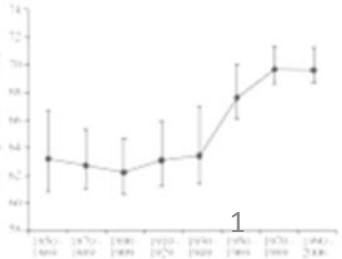
# Evgeny Andreev: a collection of resolved enigmas

# Евгений Андреев: сборник разгаданных загадок

*Vladimir M. Shkolnikov*

*Academic Supervisor. International Laboratory for Population and Health*





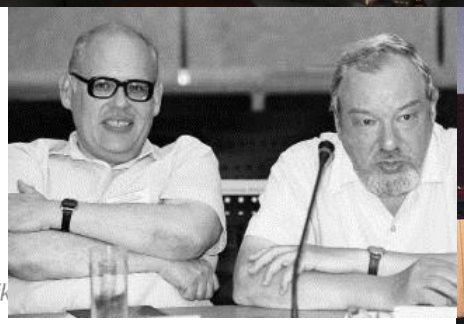
# With colleagues and friends











# E.Andreev–V.Shkolnikov: 51 joint studies since 1998

## Google Scholar screenshot

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|---|---|---|
| Educational level and adult mortality in Russia: an analysis of routine data 1979 to 1994<br>VM Shkolnikov, DA Leon, S Adamets, **E Andreev**, A Deev<br>Social science & medicine 47 (3), 357-369 | 286 | 1998 |
| The evolving pattern of avoidable mortality in Russia<br>**EM Andreev**, E Nolte, VM Shkolnikov, E Varavikova, M McKee<br>International Journal of Epidemiology 32 (3), 437-446 | 235 | 2003 |
| Algorithm for decomposition of differences between aggregate demographic measures and its application to life expectancies, healthy life expectancies, parity-progression ratios …<br>**EM Andreev**, VM Shkolnikov, AZ Begun<br>Demographic Research 7, 499-522 | 184 | 2002 |
| The changing relation between education and life expectancy in central and eastern Europe in the 1990s<br>VM Shkolnikov, **EM Andreev**, D Jasilionis, M Leinsalu, OI Antonova, ...<br>Journal of Epidemiology & Community Health 60 (10), 875-881 | 182 | 2006 |
| Gini coefficient as a life table function: computation from discrete data, decomposition of differences and empirical<br>VM Shkolnikov, **EE Andreev**, AZ Begun<br>Demographic research 8, 305-358 | 176 | 2003 |
| Prevalence and socio-economic distribution of hazardous patterns of alcohol drinking: study of alcohol consumption<br>S Tomkins, L Saburova, N Kiryanov, **E Andreev**, M McKee, V Shkolnikov, ...<br>Addiction 102 (4), 544-553 | 155 | 2007 |
| Mortality reversal in Russia: the story so far<br>VM Shkolnikov, **EM Andreev**, DA Leon, M McKee, F Meslé, J Vallin<br>Hygiea Internationalis 4 (1), 29-80 | 151 | 2004 |
| Increasing absolute mortality disparities by education in Finland, Norway and Sweden, 1971–2000<br>VM Shkolnikov, **EM Andreev**, DA Jdanov, D Jasilionis, Ø Kravdal, ...<br>J Epidemiol Community Health 66 (4), 372-378 | 128 | 2012 |
| Components and possible determinants of decrease in Russian mortality in 2004-2010<br>VM Shkolnikov, **EM Andreev**, M McKee, DA Leon<br>Demographic research 28, 917-950 | 122 | 2013 |
| Linked versus unlinked estimates of mortality and length of life by education and marital status: evidence from the first record linkage study in Lithuania<br>VM Shkolnikov, D Jasilionis, **EM Andreev**, DA Jdanov, V Stankuniene, ...<br>Social science & medicine 64 (7), 1392-1406 | 106 | 2007 |

# Problems and solutions: 1970s-90s

- 1972. How to translate cohort demographic indices into period ones and vice versa? **-- An original solution to the problem of demographic translation.**
- 1982. How to express relationship between changes in age-cause-specific death rates and changes in life expectancy? **-- Formula for the life expectancy decomposition by age and causes of death.**
- 1987. What is the main geographic regularity in mortality variation across the USSR? **-- First mention of the south-west to north-east mortality rise across USSR and Russia.** Co-author: R.Dmitrieva
- 1992-94. How infant mortality and life expectancy differs between socio-demographic groups within the Russian population? **-- First estimates of life expectancy and mortality by ethnic group and level of education.** Co-authors: Dobrovolskaya, Ksenofontova, Shaburov.
- 1991, 1998. Where can one get demographic data series for the USSR and Russia since the 1920s? **-- Reconstruction of continuous demographic series from 1922 to 1991.** Co-authors: Darsky, Kharkova.

# Problems and solutions: the late 1990s and the early 2000s

- 1998. If the mortality improvement in 1985-87 and its deterioration in 1992-94 are two parts of the same alcohol-related fluctuation, why the latter mortality increase was substantially greater than the former drop? **– This fact can be related to a kind of "harvest effect", due an expansion of a small vulnerable "alcohol-abuse" group during the "sober" period of 1985-90.** Co-authors: Avdeev, Blum, Zakharov.
- 1998. Why life expectancy increase in Russia over the 1980s was greater for the whole population than in any of its education groups? **– Effect of the temporal improvement in the educational composition.** Co-authors: Shkolnikov, Adamets, Leon.
- 2000. Can one explain mortality excess among the least educated in Russia by smoking, blood pressure and other conventional risks? **– 25%-30% of the excess is attributable to these factors.** Co-authors: Shkolnikov, Deev, Maleva.
- 2001. How to decompose an LE difference by age and cause-of-death if at some ages x: $M_x^1 = M_x^2$ and the decomposition formula $\delta_{x,i} = \delta_x \cdot \frac{M_{x,i}^1 - M_{x,i}^2}{M_x^1 - M_x^2}$ cannot work? **– An alternative decomposition formula proposed.** Co-authors: Shkolnikov, Valkonen, Begun.

# Problems and solutions: the 2000s

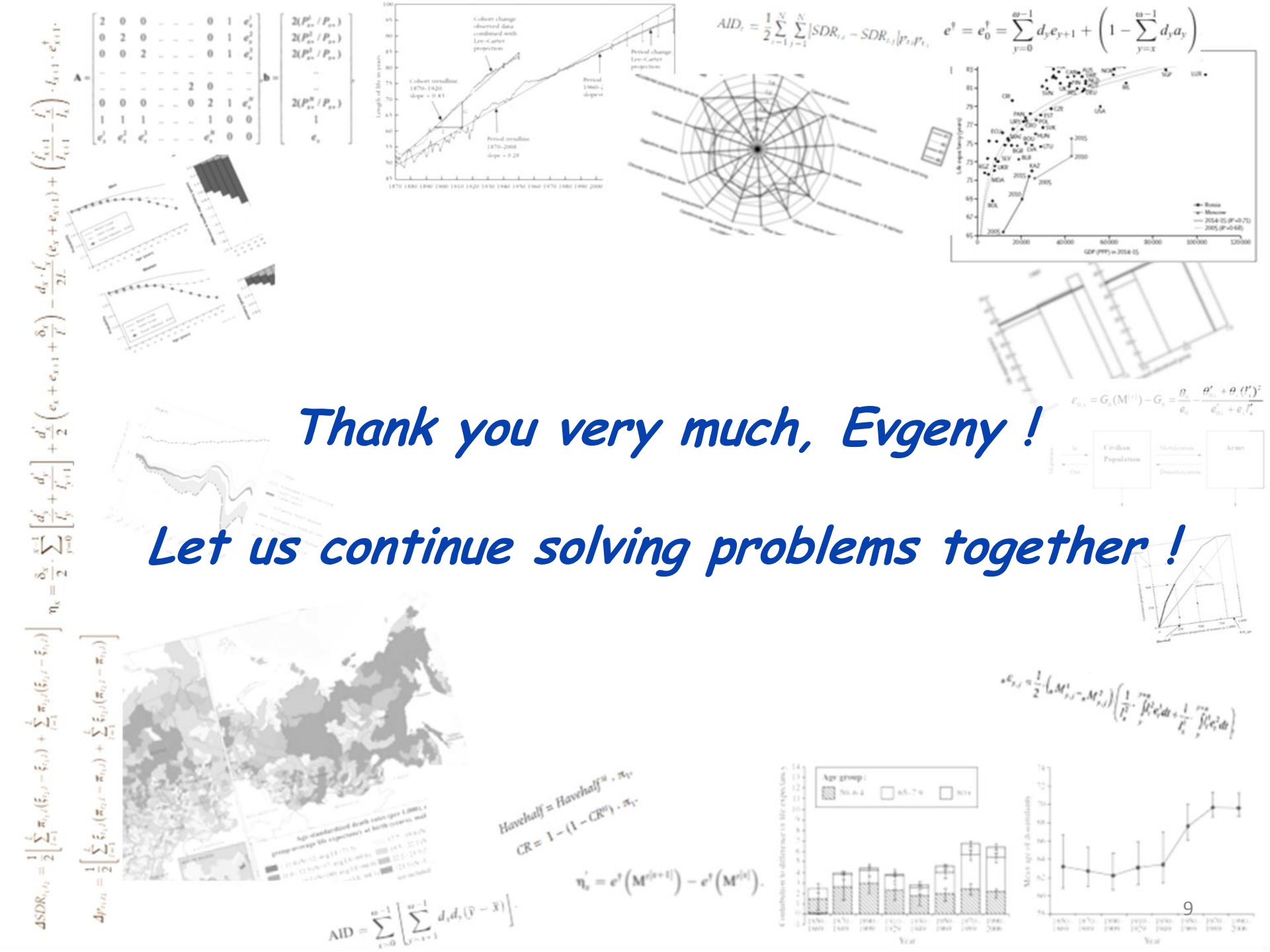
- 2002-2003. Is it possible to find a universal way to decompose a change in any aggregate measure by age and other dimensions? **– Algorithm of stepwise replacement. Decomposition of the Gini coefficient and other dispersion measures of the life table. New formula for decomposition of the healthy life expectancy by age and by mortality and health within each age. New types of decompositions - by population group, by intensity and composition.** Co-authors: Shkolnikov, Begun.
- 2001-04. What driving forces stand behind the large mortality changes in Russia in the 1970s-90s? **– In-depth studies on life expectancy and causes of death via trends and international comparisons. Alcohol, health care system, human insecurity.** Co-authors: Meslé, Vallin, Leon, Shkolnikov, McKee.
- 2003. No estimates of healthy life expectancy in Russia (?) **– First analysis of self-perceived health and health expectancy in Russia compared to EU countries. Strong female disadvantage in health found.** Co-authors: Shkolnikov, McKee.
- 2004. Is very low mortality among Russian Jews attributable to their higher socioeconomic status? **– Analysis of mortality by ethnicity and education. Results: "No" for men and "Yes" for women**. Co-authors: Shkolnikov, Anson, Meslé
- 2006. How life expectancy changes in Eastern European countries are related to changes within education groups? **– Decomposition analysis. Educational change pushes LE of the whole population up**. **No LE decrease among people with high education in Russia in the 1990s. The whole progress in Estonia over the 1990s was due to the highly educated group.** Co-authors: Shkolnikov, Jasilionis, Leinsalu, Antonova, McKee

# Problems and solutions: the late 2000s&2010s

- 2007. How evenly or unevenly the task of population reproduction is distributed across women in different countries? **– Analysis of the concentration of reproduction in developed countries with the concentration curve and the concentration ratio. Higher concentration in the USA and Northern Europe and lower concentration in Eastern and Southern Europe. Concentration increases across female cohorts due to an increase in childlessness.** Co-authors: Shkolnikov, Houle, Vaupel.
- 2011. How survival in scientific elites differs from mainstream population across time? – **Analysis of life expectancy changes in the British Royal Society and the Russian Academy of Sciences since the 17th-18th centuries. The life expectancy advantage began to increase in the end of the 19th century when the means to fight diseases became available.** Co-authors: Jdanov, Shkolnikov, Leon.
- 2011. Why USA experiences high disparity with respect to age at death? **– Analysis of the lifetime losses e-dagger and its components. The phenomenon is related to the American epidemiological pattern and cannot be explained by socioeconomic disparity in the USA.** Co-authors: Shkolnikov, Oeppen, Vaupel.
- 2011, 2014. What are the major components and determinants of the continuous life expectancy increase in Russia after 2003-4? – **In-depth analysis of age- and cause-of-death patterns. Reduction of alcohol-related and external cause mortality at ages 15-60 and a new reduction of mortality from CVD at old ages. Growing role of the medical care system as a factor of the success**. Grigoriev, Meslé, Pehholdova, Shkolnikov, Fihel, Vallin, Leon, McKee.

# Problems and solutions: the 2010s

- 2015. What stands behind large numbers of violent deaths with undetermined intent in Russia? – **Multinomial logistic modeling and prediction allowed to re-distribute the ill-defined category among homicides, suicides, and accidents. The model used additional information from death records – especially S- and T-codes (ICD chapter XIX) classifying death events according to the character of body damages**. Co-authors: Shkolnikov, Pridemore, Nikitina.
- 2018-19. Does life expectancy in Russia agree with levels of the average per-capita income? – **Analysis of the relationship between the per capita GDP PPP and life expectancy for Russia, Moscow, and other oblast-level regions. Both Russia and Moscow have substantially lower life expectancies compared to values predicted by the per capita GDP. Life expectancy variation across regions is unrelated to their per capita GDP**. Co-authors: Shkolnikov, Tursun-zade, Leon



***Thank you very much, Evgeny !***

***Let us continue solving problems together !***