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MORTALITY FROM EXTERNAL CAUSES IN RUSSIA

For seventeen years of this century, about four and a half million Russians died from "injuries, poisonings and some other consequences of the influence of external factors" — that is, from external causes. "External causes of death" (hereinafter — ECD) are responsible for every ninth (!) death in Russia in the 21st century[2].

The recently published book of the Institute of Demography of the NRU Higher School of Economics "Mortality from External Causes in Russia Since the mid-20th Century"[3] is perhaps the only comprehensive description of a very important component of Russian mortality. For the sake of justice, it must be said that there is an extensive literature, mainly articles, on certain groups of ECD, the situation with ECD in some regions, etc. But all the same, in terms of the degree of attention, and even more so of a comprehensive study, the "external causes" are clearly inferior to other causes and classes of causes of death in Russia. The book of the Institute of Demography (Scientific Editor — *A. G. Vishnevsky*) demonstrates the complex and very complete description and analysis of the Russian ECD phenomenon. Its authors set themselves the task not only to evaluate the quantitative and structural composites of deaths from external causes in Russia systematically and in detail, but also to present the historical and geographical panorama of the problem.

Structurally, the book consists of a preface, conclusion and 10 chapters.

The first chapter is entirely devoted to the classification of ECD and sources of data about them. It should be noted that in all chapters devoted to one or another type of ECD, there is a section detailing the classification of this cause, the rules for its coding in accordance with ICD and the specifics of recording deaths from this cause in Russia.

The second chapter examines the situation with mortality in Russia within the framework of the concept of epidemiological transition — the "historical shift from the era when mortality depended crucially on hunger and epidemics, and the average life expectancy ranged from 20 to 40 years ... to the era of chronic diseases, caused mainly by human aging or human activity... life expectancy reaches... 70 years and above"(P.46). In developed countries the second epidemiological transition (or the second epidemiological revolution) is successfully underway since the 1960s, at first there was a drastic reduction, a practical cure for infectious mortality. The second transition is to reduce mortality from non-infectious causes of death: diseases of the circulatory system, neoplasms, respiratory diseases and ECD. On the basis of comparisons of the dynamics of mortality from various causes (in standardized indicators), the structure of mortality by cause, the change in the average age of death from major causes, incl. from the ECD, of our country and many countries of the world, it was concluded that in this respect Russia lags behind the majority of developed countries by half a century. "In Russia, it (the *second epidemiological revolution — DB*) has to be considered invalid" (p.56), the authors summarize. Hence, such a high mortality rate, and such significant losses in life expectancy from the ECD.

The third chapter gives an overview of the deaths from ECD, the fourth deals with traffic accidents, the fifth deals with murders, the sixth with suicides, the seventh with accidental alcohol poisoning, the eighth with deaths from injuries with uncertain intentions (IUI).

These chapters (3rd-8th) are arranged in a similar way: first, a certain history of this type of "damage" is given, then, as already mentioned, the place of this cause in the ICD and its accounting in Russia, the dynamics of mortality from this cause[1], mortality in Russia against the background of other countries, usually developed, demographic (sex and age) and geographical (region) characteristics of mortality.

Surprising is some discrepancy of the volume of the chapter of the book about car accidents to the weight of the given reason among all ECD. This is the largest chapter occupying more than a fifth of the text, and if we take into account the tenth chapter, which deals with losses from non-fatal injuries in car accidents, a whole quarter. Car accidents themselves define "only" 14% of deaths from ECD for 2005−2013. But in the chapter on mortality in car accidents there is such an atypical for the whole book, but a very interesting section, like "Car accidents, corruption, social inequality and criminal statistics" (pp. 167−180), where a sociological analysis of car accident injuries rather than demographic is given. And there is also a very important

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[1] The time series begin in 1956, when the statistical development of the causes of death was extended to the entire rural area (prior to that since the 1920s - only in urban settlements, post-war times included certain rural settlements as well). The series ends, as a rule, in 2014.

tool for analyzing the risk factors for car accidents with the aim of preventing them — the "Haddon Matrix" (p. 180−205)[1]. Meanwhile, invented and used to improve road safety, it can be used as an analytical tool in other areas related to injuries.

In the chapters on murders and suicides, in addition to the above mentioned topics, there are also distributions by month of the year (for murders also by day of the week and time of day), which always (!) cause confusion not only for the public in general, but also for a completely professional audience. The fact is that the high level of these events / deaths is characterized by lovely, clear, warm and optimistic spring-summer months. For suicides - this is May-July (p.275), for murders - March-May (p. 212)[2]. As for suicides, it was noticed on the material of European countries in Durkheim's classic work[3]. It is a pity that the same monthly distributions are not given for car accidents, which have a pronounced autumn maximum (August-October) and for accidental alcohol poisoning, which peak in January. Incidentally, the "atypical" January rise of murders in the background of the "winter lull" (p. 275), coinciding with the peak of death from alcohol poisoning, can be explained by abundant drinking on long holidays, because "according to the Ministry of Internal Affairs, up to 80% of killers and 60% of their victims drank alcohol immediately prior to committing the crime (p.239)."

The chapter 8 on mortality from damages with indefinite intentions (DII) deserves special attention. This group is a "collector" or "garbage pit", where deaths from ECD are collected, for which it is impossible to find out whether death was intentional (murder, suicide) or accidental. It is assumed that here cases of latent murders and suicides accumulate. The dynamics of this group of deaths is exceptional even against the background of mortality from all ECD: "over the past half century, the standardized death rate from DII in Russia increased 8-fold in men and 7-fold in women (p. 334)." Waving along with the fluctuations of all deaths, the number of deaths from DII, nevertheless, takes an increasing share among ECD. If in the early 1990s DII accounted for less than 10% of all ECD, in 2000 — for 13, in 2010 — 18, and in 2014 — 23%. Of course, this is not a real increase in the uncertainty in determining the cause of death, but an increase in the number of concealed violent deaths. In Western countries, it is believed that most suicides are concealed: among

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[1] Unfortunately, this tool is not very well known in Russia: when I inquired in Yandex, among the first two dozen references, more than half was on the work of the authors of this book.

[2] A small note: for some reason, the petal diagrams on the two pages are deployed in different directions - clockwise and counter-clockwise. But this is a claim to the editorial staff rather than to the authors.

[3] "Most often... the maximum number of suicides falls on June... May... and in July." E. Durkheim. Suicide. Saint Petersburg.: Soyuz, 1998. P. 109.

DII a large proportion of hanging, drowning, poisoning (in the US up to 60% of DII are poisonings with medications and drugs). In Russia, 30% of DII is contact with an acute or blunt object, so it can be assumed that most of the murders are concealed (p. 344). The chapter gives an estimate of DII distribution by the three real causes of death, made in an English-language article by our compatriots[1]. Using additional information from medical evidence of death, they came to the conclusion that 48% of Russian DII for 2000−2011 refer to non-transport accidents, 36% to murders and 16% to suicides (p. 356). It follows that it is not murders, but non-transport accidents constitute the largest part of DII. But even if we accept such a distribution, still the number of murders in Russia for 2000−2011 will have to be increased almost by half (by 180 thousand), and suicide — by 15% (by 80 thousand).

The ninth chapter is devoted to the role of the ECD in the mortality of the elderly. It is noted that in Russia the deaths of the elderly (75 and older) associated with fractures after falls (injuries) are often attributed to subsequent complications and are coded as diseases of the cardiovascular or respiratory systems. Therefore, the mortality of the elderly from ECD in Russia is not as high against the background of other countries, as in younger ages.

In the tenth chapter, losses from injuries are clarified by the example of car accidents. The number of injured as a result of external causes is twenty times higher than the number of deaths from ECD, while for car accidents this ratio is 5 (p. 428, *possibly it is the result of the severity of injuries in car accidents — DB*). The conclusion is drawn that post-traumatic limitations of activities of daily living, although not all traumas lead to them, make a significant contribution to the loss of years of healthy life.

In conclusion, the authors propose to take a fresh look at ECD, based on the epidemiology of external causes of death, which is developing in the world (*The epidemiology of accident traumas and resulting disabilities,* p.438). Here are a few examples where recent measures aimed at reducing mortality from the ECD, being formally correct, prove to be ineffective, since they do not take into account the entire chain of cause-effect relationships, i.e. epidemiology of ECD itself. The authors warn our healthcare bureaucrats against the temptation to get rid of the problem by referring to the inevitability of "the influence of lifestyle and bad habits," on which, according to the Ministry of Health, "no less than 60%" of the contribution to overall mortality depends" (p. 442). Back in the 1980s, Soviet health organizers and social hygienists adopted certain "WHO expert calculations", according to which health risk factors depend 50−57% on lifestyle, 20−25% — on the environment, 15−20% — on genetic

[1] Andreev E. M., Shkolnikov V. M., Pridemore W. A., Nikitina S. Y. A method reclassifying of death in cases categorized as "event of undetermined intent". Population Health Metrics. 2015.13: 23.

factors, 10−15% — on healthcare[1]. Until now, explicit and implicit references to the relative "smallness" of health care (only 10%, and sometimes about 8% is mentioned), compared with a 50−60 percent "lump" of lifestyle are present in many works on health and its organization. But the authors of the monograph rightly remark that the lifestyle and "bad habits are present among people in all countries, but mortality is different everywhere." So something could be done with the healthcare 8-10-15 percent as well.

The main shortcoming of the book should be attributed to the absence of any sociological analysis of the ECD problem. This approach is present, as already said, only in the chapter on car accidents, and very fluently in "Factors that affect the deaths from homicides" (p. 235-238). Perhaps it is the authors' desire not to go beyond their professional area. Moreover, demographic material is more than enough to describe and analyze ECD.

Not quite in consistence is the structure of the chapters: as already noted there are no monthly distributions of deaths in chapters on car accidents and accidental poisoning with alcohol, there is no description of Russian regions in the chapters on car accidents and suicides. However, a map showing the suicide rate for the countries of the world is shown (p. 267). Speaking of such a visual representation of the material as a map, one can not but be glad of their presence in the book. But, not to mention the difficultly discernable filling and shading, a simple projection is selected for them, where huge, but sparsely populated Asian part expanses completely obscure the fractional European part. And this is where 80% of the Russian population lives. Maybe it should be shown on a larger scale, to distinguish, for example, the Voronezh region from the Tambov region?

But there are drawbacks to the book, which stem from its merits. Such an, I would say, accentuated detailed description of the dynamics, structures, complex indicators characterizing the situation, the abundance of graphs and tables makes the book difficult to read for "*all who are interested in Russia's demographic problems*", as it is written in the abstract. Let's hope that lovers will still struggle through the abundance of numbers, abbreviations, etc. And God himself commanded "*students, graduate students, teachers and research associates*" to immerse themselves in these concentrated texts. And I would also like to see this book, or at least its conclusion, be noticed in those circles where they make decisions or prepare inquiries for those who make decisions.

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[1] «Our calculations (Y. P. Lisitsyn) according to data on incidence of the population show that the first place among the risk factors is the way of life, moreover, health directly depends on it. The share of lifestyle factors exceeds half of all impacts. ... Our calculations based on the incidence data, have been confirmed in the studies of American and other authors.» Y. P. Lisitsyn. Public health and healthcare. DOI: https://studfiles.net/preview/4333894/page:4/