Editorial: Impact of alcohol on mortality in Eastern Europe: Trends and policy responses

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Abstract

Within the global context Eastern Europe has been repeatedly identified as the area with the highest levels of alcohol-related health harms. Although the Berlin wall fell in 1989 and the Soviet Union collapsed soon afterwards, alcohol-related mortality in Eastern Europe remains far higher than in Western Europe. However, despite the high burden of alcohol harm and mortality in Eastern Europe, with the partial exception of Russia, relatively little is known about the country-specific impact of alcohol on health and mortality, and the various policy responses to it. In response to this an international symposium was held in Vilnius, Lithuania in June 2017 entitled *Persisting burden of alcohol in Central and Eastern Europe: recent evidence and measurement issues.* This special section of *Drug and Alcohol Review* is based on a selection of the papers presented at this symposium, providing for the first time a broad overview of the problem of alcohol-related mortality in a diverse range of Eastern European countries linked to a description and analysis of alcohol-control initiatives that have developed. While there is strong evidence of the influence of history, culture and education across European countries having a profound and persistent effect on differences in drinking patterns and preferences, there is nevertheless evidence that effective policy responses have been mounted in a range of countries.

Key words: Eastern Europe, alcohol consumption, alcohol policy, alcohol-related mortality, political change

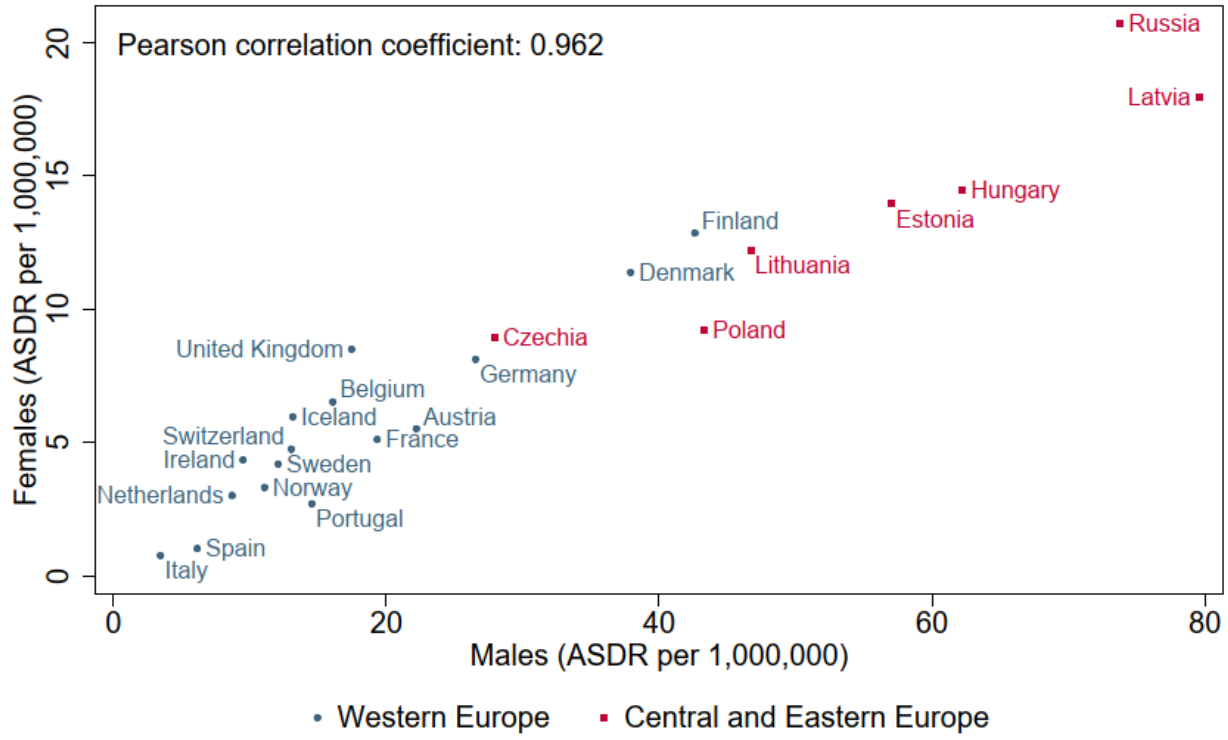
Within a global context Eastern Europe has been repeatedly identified as the area with the highest levels of alcohol-related health harms and mortality [1-3]. The role of alcohol in the Russian mortality crisis of the 1990s has provided some of the most vivid and well researched examples of how alcohol can have a huge impact on population mortality levels and life expectancy [4-6]. This extraordinary phenomenon, in which the collapse of the Soviet Union (USSR) was followed by a 6-year decline in life expectancy among males, and a slightly smaller one among females, has been attributed to huge increases in the availability of cheap alcohol against a background of massive societal disruption. The Russian case, however, is also important as it provides insights into the impact of government and public health policies aimed at reducing harmful alcohol and harms. The Gorbachev anti-alcohol campaign of the mid-1980s, that preceded the end of the USSR, stands out as one of the most striking alcohol policy interventions that had an impact across all countries of the USSR [7,8]. It has many classic elements that are well established as effective in controlling alcohol -- reducing availability and increasing price -- although it was intrinsically Soviet and authoritarian in its design and implementation, and as such does not provide a plausible model for open societies. In the mid-2000s a series of epidemiological studies drew attention to the still very high burden of alcohol-related mortality in Russia [9,10]. This resulted in new and more effective efforts to reduce the availability of alcohol, particularly non-beverage alcohols [11,12]. These in turn appear to have had a positive effect on mortality trends [13].

Compared to Russia, far less is known about the impact of alcohol on health and mortality in other former communist countries of Europe. In particular, there is relatively little in the international literature on the various policy responses initiated in these countries to varying levels of alcohol problems [14]. For example, in the most recent period Lithuania has received some attention as being the country with one of the highest current levels of liver cirrhosis mortality [15]. The policy responses in this former Soviet country have been extensive, but until recently [16] little was known about them. Other Central and Eastern European countries that were part of the communist bloc but not part of the Soviet Union have had smaller but distinctive patterns of change in alcohol harm and mortality, although again the literature on this is relatively sparse.

Despite the fact that the Berlin wall fell in 1989 and the Soviet Union collapsed soon afterwards, nearly 30 years ago, alcohol related mortality in Eastern Europe remains far higher than in Western Europe. This is well illustrated in Figure 1, which shows for the period 2015-16 age-adjusted mortality for the aggregate of all directly alcohol attributable causes by European country for men and women separately. The gap between East and West is remarkable, although it is notable that there are two Western European countries (Finland and Denmark) among the mainly Eastern European countries with highest rates among males and females. It is also notable that male and female rates are highly correlated.

Combining together all the various components of directly alcohol-related causes of death as done in Figure 1 was necessary to minimise the known variation between countries in preferences in how alcohol is certified as a cause of death [17, 18]. For example, in several former Soviet countries alcoholic cardiomyopathy is commonly coded, while in Western countries it is far less often specified as an underlying cause [19], with liver cirrhosis instead being the most dominant component of directly alcohol-related mortality [20].

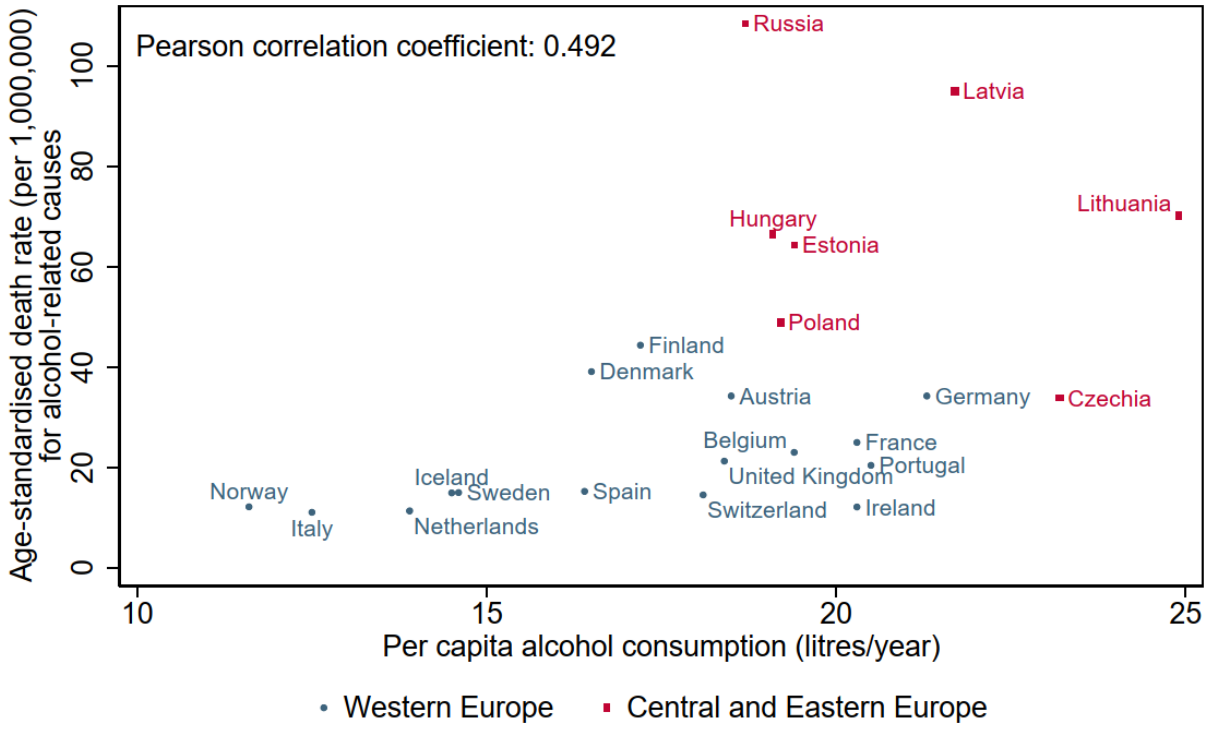
Figure 1. Correlation between male and female age-standardised death rates (ASDR, age 15+ years), all alcohol-related causes combined, 2015-2016.



Notes: Alcohol-related causes of death include following International Classification of Diseases, Tenth Revision categories: F10, K70, X45, I42.6, E24.4, G31.2, G62.1, G72.1, K29.2, K85.2, K86.0, O35.4, P04.3, Q86.0, R78.0, X65, Y15, Y90 and Y91. Source: World Health Organization Mortality database, Human mortality database, Rosstat.

A comprehensive understanding of the persistence of these East-West differences is still to be accomplished. While data on per capita consumption for different countries has been produced, for a number of Eastern European countries in particular, these figures include what are essentially crude estimates or best guesses of the volume of unregistered alcohol consumed. Even these crude estimates, however, suggest that high levels of alcohol-related harm in the East are generally associated with high levels of per capita alcohol consumption, as can be seen in Figure 2. On the other hand, alcohol consumption per se does not perfectly predict mortality, as can be seen for example in the difference between the United Kingdom and Hungary, which have similar consumption levels but very different levels of alcohol-related mortality. A search for mediating factors such as policies or structural differences is thus needed.

Figure 2. Correlation between alcohol consumption and alcohol-related mortality (2015-2016), males, age 15+ years.



Notes: Alcohol-related causes of death include following International Classification of Diseases, Tenth Revision categories: F10, K70, X45, I42.6, E24.4, G31.2, G62.1, G72.1, K29.2, K85.2, K86.0, O35.4, P04.3, Q86.0, R78.0, X65, Y15, Y90 and Y91. Source: WHO Global Information System on Alcohol and Health, World Health Organization Mortality database, Human mortality database, Rosstat.

Further work is necessary to look in more detail at certification and coding practices for alcohol-related deaths, which should include the analysis of multi-cause data and not just underlying cause. There are also more fundamental questions of the influence of history and culture across European countries that clearly have a profound and persistent effect on drinking patterns and preferences. Finally, there is the need to learn more from the effectiveness of various policy responses to alcohol in Eastern as well as Western Europe.

In a response to these various unanswered scientific and policy questions, an international symposium was held in Vilnius, Lithuania in June 2017 entitled *Persisting burden of alcohol in Central and Eastern Europe: recent evidence and measurement issues.* This special section of *Drug and Alcohol Review* is based on a selection of the papers presented at this symposium, bringing the information more up to date, and also developing some of the themes in more detail. This collection of papers is the first time that a broad overview has been provided of the problem of alcohol-related mortality in a diverse range of Eastern European countries, linked to a description and analysis of alcohol-control initiatives that have developed. Countries in the region have varied in the timing and extent of their willingness to address this problem, and there is today considerable variation in the alcohol-related burden.

The country specific case studies on the most affected countries – Russia, Lithuania and Belarus – provide some grounds for optimism due to systematic and substantial progress during the last 10 or even 15 years. This progress is also reflected in the weakening impact of acute alcohol poisonings (a proxy measure of prevalence of harmful drinking) on changes in male life expectancy. As Danilova and colleagues [21] show, the recent remarkable improvements in life expectancy in Russia occurred thanks to other factors beyond the impact of reducing the harmful alcohol consumption. Despite important achievements, the former USSR countries are still very far from the levels observed in Western and even former communist Central Europe. The reasons for the persisting disadvantage are still not fully understood. Two studies in this special section focus on socioeconomic and geographical disparities as potential determinants of excess alcohol-related mortality in the region. Grigoriev and colleagues [22] present new evidence about geographical hotspots of high and low alcohol-related mortality within countries and across their national borders. The findings suggest that the origins of the ongoing alcohol epidemic have historical and socio-cultural dimensions, which can be attributed to complex political and territorial changes during the 19th and 20th centuries. Meanwhile, Pechholdová and Jasilionis [23] explore persisting differences in alcohol-related and all-cause mortality between a former USSR country (Lithuania) and Czechia. Their findings indicate that alcohol-related mortality shows substantial differences across educational groups in both countries. However, absolute mortality disparities were much larger in Lithuania, suggesting an extremely high mortality level in the lowest educational group. The authors conclude that specific policies aiming at reducing harmful alcohol consumption in lower socioeconomic groups may have a very strong potential to reduce overall mortality burden at the national level [23, 24]. Three studies on Estonia, Lithuania and Belarus systematically explore potential links between the most recent alcohol control policies, alcohol consumption and alcohol-related mortality [25-27]. The reported evidence implies that the majority of alcohol control policies in the three countries have been targeting entire populations, and mainly focused on reduction of alcohol affordability via taxation and/or tightening control over the alcohol production and market. The measuring of the exact effects of these policies is often complicated, due to many confounding factors, such as possible effects of the 2008 financial crisis on affordability of alcohol. However, the Lithuanian experience suggests that introducing these measures led to immediate massive improvement in male life expectancy, with alcohol-related causes of death making a substantial contribution to this progress [26, 28]. Several authors in this section raise concerns about the sustainability of these policies. In her article, Pärna [25] convincingly illustrates how the failure of coordination between two neighbouring countries may have led to a huge increase in cross-border alcohol trade, and even price wars, inspiring weakening of existing alcohol control measures. These problems occur in the context of more fundamental threats such as the persisting strong influence of the alcohol industry [29] and a lack of a broader consensus about alcohol control in the society and politics. These challenges persist because alcohol epidemics in the region reflect long-standing social problems requiring inter-sectorial efforts going beyond health policies. In light of this, Štelemėkas and colleagues [30] warn that, despite the fact that alcohol-related harm remains very high on the political agenda, there is a need for permanent and systematic monitoring efforts and for tight public control of the complex and often very controversial decision-making process in this area.

Overall, this collection of country-specific studies in this special section highlights progress in reducing alcohol-related harm during the second half of the 2000s and the 2010s. Despite these important achievements, Eastern Europe still retains at a huge disadvantage in an international context, remaining the global region with the most unfavourable statistics. Although there has been a weakening relationship between acute alcohol poisoning and life expectancy in Russia and some other countries, many direct and indirect consequences of harmful alcohol consumption continue to play an important role in driving life expectancy in these countries. Therefore, future prospects of both overall health improvement and reduction of the alcohol mortality burden will depend on the sustainability of alcohol control policies. Although the implemented measures seem to be effective, in many cases they remain fragmentary, and should be reinforced by more comprehensive policy options based on best practices and international recommendations [2,31].

A close and timely monitoring of the changes in both alcohol-related harm and policy implementation should be one of the principal components of an effective alcohol control agenda [32]. There is a need for better data and methods for the assessment of multiple dimensions of alcohol-related harm [33]. In particular, even more attention needs to be given to assessing the impact on health of the episodic spirits drinking that is still an important feature of alcohol consumption in much of Eastern Europe. More efforts are still required for solving methodological challenges such as accounting for unrecorded consumption [34,35]. Finally, there is growing concern about whether current alcohol control policies can be sustained in the future in Eastern Europe. Such policies require stable political consensus -- which is not a feature of Eastern European societies, with persistent political and social divisions and a high volatility of electoral outcomes [36-38]. The forthcoming parliamentary elections in Lithuania in the fall of 2020 will be a crucial point testing whether reversals in policies are possible in a country where alcohol issues have already been very high on the political agenda for more than 10 years.

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