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Economic aspects and determinants of alcohol consumption among women in europe as a danger to the elderly

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Abstract

Alcohol consumption is one of the main factors affecting human health and the economy of many European countries. In recent years, an increase in alcohol consumption among women in Europe has been observed, leading to numerous health and economic consequences. This is particularly concerning as excessive alcohol use poses as a risk to older adults. The analysis carried out is needed to thoroughly understand the factors/determinants that deepen the alcohol problem among women, and to present the economic aspects and their final impact. In order to improve the action of improving public health protection, a preventive model DNA Determinants/Nation/Action was created, showing the trajectory of economic costs in relation to the possibility of counteracting alcohol consumption among women in the level of demand elasticity determinants. Alcohol consumption is associated with serious economic, health and social consequences. The existing discrepancies in the method of estimation and analyses taking into account individual components prevent a reliable analysis. Currently, special attention is paid to the large availability of alcoholic beverages, including the lack of restrictions on their sale and advertising, and falling prices, which correlates with the deepening alcohol problem among women. All the economic costs associated with this are a consequence of the lack of supervisory units in individual EU countries. (Gerontol Pol 2025; 33; 31-37) doi: 10.53139/GP.20253307

Keywords: *Alcohol consumption*, *economic, women*

The economic consequences of alcoholism in women in Europe are multifaceted

Alcoholism is an addiction to alcohol that has a significant impact on physical and mental health, as well as on social and economic aspects. In Europe, alcoholism in women has become a serious health and social problem. Understanding the economic consequences of this problem and the determinants of risk is crucial to developing effective preventive strategies.

Alcoholism among women in Europe is a growing health and social problem, also having significant economic consequences. According to the WHO, the European region has the highest alcohol consumption in the world and the economic impact of alcohol abuse in Europe is estimated at 2–3% of the GDP of individual countries [1]. The total measurable cost of alcohol to the European Union amounted to 125 billion euros (79 billion euros – 220 billion euros) in 2003, which corresponds to 1.3% of GDP (0.9% – 2.4%). The actual expenditure on alcohol-related problems amounts to EUR 66 billion, while the potential production not realized due to absenteeism, unemployment and premature mortality amounts to another EUR 59 billion. The largest costs of alcohol abuse and addiction are indirect costs: resulting from mortality - EUR 45.2 billion, crime - EUR 41.4 billion, health care - EUR 27.7 billion, unemployment - EUR 17.6 billion, road accidents - EUR 12.6 billion or absence from work - EUR 11.3 billion [2].

According to a report prepared for the European Union by Anderson and Baumberg in 2006, alcohol causes health inequalities both between and within Member States, causing an estimated 90 additional deaths per 100,000 men and 60 additional deaths per 100,000 women in the newer EU10 countries, compared to the older EU15 countries [3].

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In Europe, men drink 14.9 liters of spirits per year, while women drink four liters. In the Old Continent, 11% of adults suffer from alcohol abuse problems, and 5.9% are addicted, the report states. The WHO report states that alcohol is one of the most common causes of death in Europe, accounting for approximately 800,000 deaths per year [1]. More than 58 million people consume more than 40 g of alcohol per day. It is estimated that more than 23 million people in Europe suffer from alcohol addiction each year [4].

Alcohol consumption is associated in particular with many adverse consequences – acute (e.g. accidents and injuries) and chronic (e.g. liver disease) – which harm not only the drinker, but also entire societies (e.g. decreased productivity, crime or disruption of public order) [5,6].

Alcoholism is a significant health and social problem that has a significant impact on various aspects of individual and social life. It affects both men and women, but due to biological, social and cultural differences, alcoholism in women requires separate analysis due to the numerous health problems they face, such as liver disease, cancer and neuropsychiatric disorders. Furthermore, the long-term effects of alcohol abuse, including cognitive decline and increased risk of falls, pose as a risk to older adults. Among women, alcohol consumption during pregnancy is particularly dangerous, leading to the development of fetal alcohol syndrome (FAS). Prenatal exposure to alcohol can cause fetal alcohol spectrum disorder (FASD) in the child after birth, covering a range of physical, cognitive and behavioural abnormalities. FASD means a serious disability of genetic origin, which can be avoided by abstinence from alcohol during pregnancy and when planning it [7].

According to the aforementioned EU report from 2006, alcohol abuse leads to loss of productivity. Especially in the productive age, alcoholism affects more frequent absences from work, reduced productivity and increased health costs related to the treatment of alcohol-related diseases. The WHO states that excessive alcohol use is responsible for a significant part of lost working years, which negatively affects the economic development of European countries.

In addition, alcoholism leads to increased healthcare costs, as people who abuse alcohol are more likely to be hospitalized, require treatment for chronic conditions, and require mental health support. These costs burden both public health systems and private insurance, contributing to the overall cost of treatment in a given region [1].

In summary, despite the shortcomings of the data discussed above, it seems clear that the economic burden of alcohol dependence is significant and accounts for a large proportion of the overall costs of alcohol misuse. Furthermore, these shortcomings may lead to an underestimation of the overall impact of alcoholism, and further research into the therapeutic costs of this disease is urgently needed. The value of such studies lies in their potential to determine the range of negative economic consequences associated with alcohol dependence and the projected benefits that can be achieved through effective prevention and treatment. The variable quality of many studies means that they must be viewed with caution. Developing a reliable evidence base can help us understand how the high economic burden of alcohol dependence, which carries important policy implications for health systems and society as a whole, is being addressed [8].

Objectives

Alcohol consumption is one of the main factors influencing human health and the economy of many European countries. This problem is particularly important in the context of women, whose alcohol consumption patterns and related consequences differ from those observed in men. In recent years, an increase in alcohol consumption among women in Europe has been observed, leading to numerous health and economic consequences. The analysis carried out is needed to thoroughly understand the factors/determinants that deepen the alcohol problem among women, and to present the economic aspects and their final impact. In order to improve the action of improving public health protection, a preventive model DNA Determinants/Nation/Action was created, showing the trajectory of economic costs in relation to the possibilities of counteracting alcohol consumption among women in the level of demand elasticity determinants.

Methods

Data was collected mainly from the following sources: statistics and research results published by the World Health Organization (WHO), the European Institute of Women's Health (EIWH), the Europan Commission and the PubMed publication database. This information was analyzed in terms of economic aspects and determinants of alcoholism in women in order to find further solutions. A comparative analysis was performed to deepen the issue and present a model of DNA prevention. Some of the proposals listed in this analysis were developed specifically for its needs.

Determinants of alcoholism

The starting point for Marc Lalonde's concept of health areas was the following definition of health: „Health is the result of factors related to genetic inheritance, environment, lifestyle and medical care. Promoting a healthy lifestyle can improve health and reduce the need for medical care". Therefore, any action to reduce alcoholism in societies brings health benefits to individuals, but also has a positive impact on the economy of countries. Lalonde distinguished groups of factors that affect the health status of the population - the so-called health areas: the area of biology and genetics, behavior and lifestyle, the environmental (economic, social, cultural and physical factors) and the area of the organization of the health care system [9].

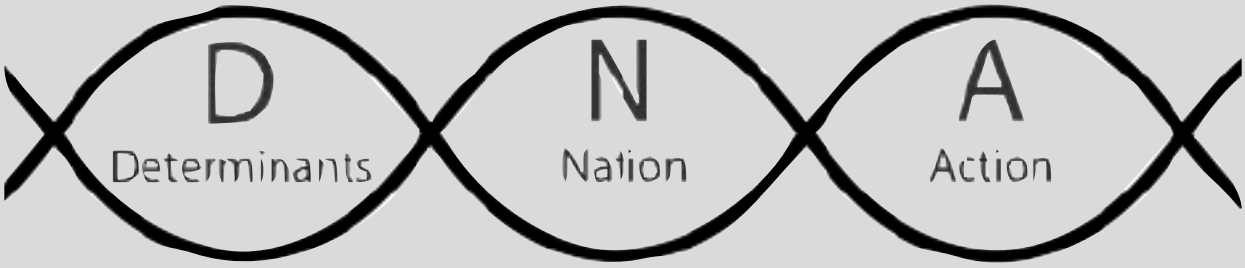
The health situation is influenced by many non-medical factors, called „social determinants of health". These are the conditions in which we exist and a broader set of forces and systems that shape everyday life, including the economic context and government policy [10]. The economy can affect health in several ways, including through income and social protection, housing, the environment, education and employment, and occupational safety [11]. In many European countries, alcohol consumption is part of the culture of these countries. It provides women with relaxation, is often associated with leisure and social events [1]. Alcohol drinking therefore has multidimensional connotations. Cultural, social and religious norms also affect alcohol consumption – the acceptability of drinking alcohol, the ease of purchasing it (availability) and the price (affordability). The causes of alcoholism are therefore multidimensional and require a range of health promotion measures to reduce the factors causing uncontrolled alcohol consumption and to enable societies to increase supervision and improve health so that they can fully realize their potential [12]. The most basic law of economics called the „downward-sloping demand curve" connects the price of a product with the demand for this product. Therefore, it can be expected that an increase in the price of alcohol (i.e. through tax increases) will reduce alcohol consumption and its adverse consequences. An increase in the total price of alcohol can reduce consumption and its consequences – drink-driving, the frequency of diseases, injuries and deaths related to alcohol use and abuse – and reduce violence and other related offences and crimes. The price of alcohol can be manipulated through excise tax policy – findings regarding the relationship between alcohol price and its consumption are undoubtedly important for those interested in reducing alcohol consumption and its negative consequences [13].

In contrast, the activation of genetic factors for alcoholism is influenced by the "alcohol environment," because alcohol exposure is a necessary prerequisite that can reveal genetic risk. Studies have confirmed the influence of genetic and environmental factors on alcohol consumption, and these differ according to the density of alcohol outlets in a given community. For example, the heritability of frequency of alcohol consumption was 74% (95% CI = 55–94%) for individuals living in neighborhoods with 10 or more outlets compared with 16% (95% CI = 0–34%) for those living in neighborhoods with zero outlets. The effect of outlet density was not explained by state of residence, population density, or neighborhood sociodemographic characteristics. The results suggest that living in a neighborhood with many alcohol outlets may be particularly risky for individuals who are genetically predisposed to frequent drinking [14]. Furthermore, excessive alcohol consumption poses as a danger to the elderly, increasing their risk of falls, cognitive decline, and other health complications. The model below illustrates the critical issues described above related to the determinants of social acceptability, market availability and affordability of alcohol, and the impact of alcoholism on people and their communities [15]. The model was created using the DNA helix trajectory concept to illustrate the necessary preventive actions. The model is intended to help in simple diagnosis of the problem in a given country and implementation of actions aimed at protecting public health (table I.). Additionally, the long-term effects of alcohol abuse, such as liver damage and neurological disorders, present as a danger to the elderly, who are often more vulnerable to these health issues.

Alcohol consumption patterns among women in Europe

Historically, women have consumed alcohol less frequently and in smaller quantities than men. However, in recent times, the changing social role of women and the decline of taboos around alcohol have led to an increase in the frequency and level of consumption among women. Increasingly, young women in Europe are becoming more likely to binge drink, and their alcohol consumption is in many ways more dangerous than that of men, as women are particularly vulnerable to the harmful effects of alcohol. Women appear to become dependent on alcohol more quickly than men, and because they are on average smaller, have more body fat and less body water than the typical man, they experience twice the blood alcohol concentration of men who drink the same amount. The way in which men and wo-

Table I. DNA helix trajectory model illustrating necessary preventive measures for alcohol consumption. Model based on diagnosis of the problem in a given country and implementation of actions aimed at protecting public health



Factors influencing the decision to purchase and consume alcohol:	Revenue of a given country from excise and taxes – economic and social cost: S = (K health + K abstinence + K death + K illness + K police + K court + K prison) – (D excise – D taxes)	Oversight of a country's actions to enhance public health and economic protection.
Acceptability as an environmental factor – the social environment and cultural patterns of a given country.	Acceptability: determining the indicator of awareness of the negative effects of alcohol consumption and introducing information that increases awareness of the negative effects of alcohol in order to change stereotypes and environmental patterns in a given country (social and educational campaigns, awareness and social volunteering, educational platforms mandatory until the age of 18, etc.).	Acceptability: Establishing units that verify, supervise and support the effectiveness of the actions taken in the space of critical points of social acceptability.
Availability: Defining critical points: number of points of sale, marketing (advertising, promotion, sponsorship, positioning of the alcohol product, label, CSR activities).	Availability: Introduction of laws to counteract the widespread availability of alcohol. Introduction of an unconditional ban on promotion, advertising, and sponsorship for alcohol producers.	Availability: Units verifying, supervising and supporting activities in terms of reducing the availability of alcohol by monitoring compliance with the ban on advertising, sponsorship, positioning, labelling, compliance and implementing effective CSR (corporate social responsibility) activities.
Affordability: Demand – price of alcohol, government health policy.	Affordability: Introduce higher excise duty and VAT rates to minimize affordability.	Accessibility: Units that verify, supervise, and support activities in the area of shaping the demand curve.

men metabolise alcohol also differs. This is why women are at greater risk, even if they drink less alcohol than men. Furthermore, alcohol-related health problems tend to manifest earlier in women than in men. For these reasons, women are more susceptible than men to alcohol dependence, liver cirrhosis and tissue damage [16,17].

While 266 million adults drink up to 20 g (women) or 40 g (men) per day, more than 58 million adults (15%) drink even more, with 20 million (6%) drinking more than 40 g (women) or 60 g (men) per day. Looking rather at dependence on the level of alcohol consumption, we can also estimate that 23 million Europeans (5% men, 1% women) are dependent on alcohol each year.

In every culture studied in this regard, men are more likely than women to drink at all and to drink more when they do, with the difference being greater for riskier behaviours. Although many women abstain from alcohol during pregnancy, a significant number (25–50%) continue to drink, and some of them drink in a way that harms themselves and their baby. Patterns of drinking behaviour can also be seen in the context of socioeconomic status (SES), with those of lower SES being less likely to drink alcohol at all. Despite the complex picture of some aspects of alcohol use (with some measures showing opposite trends for men and women), binge drinking and alcohol dependence are more common among drinkers at lower SES [1].

According to the WHO report for 2024, the average alcohol consumption among women in Europe is increasing, especially in high-income countries. In countries such as France, Germany and the United Kingdom, there is a regular increase in the number of women consuming alcohol in a harmful way. Statistically, about 12% of adult women in Europe declare regular alcohol consumption above the recommended limits, which contributes to the increase in the number of cases of alcohol-

-related diseases such as liver cirrhosis, heart disease and cancer [18]. In countries with a higher economic affluence index, relatively more women drink alcohol. This can be observed based on the following indicator: in low- and lower-middle-income countries, for every drinking woman there are almost two drinking men (i.e. the ratio of men to women is 1.8 to 1). In countries with higher middle-income income the ratio is lower - 1.5 to 1, and in high-income countries the ratio is the smallest and is 1.2 to 1 [22]. Empowering women in society increases gender equality and can contribute to changes in gender norms in society. Although equalizing gender roles in society can improve the health of both men and women, it can also encourage women to adopt riskier health behaviors that have traditionally been more common among men [19].

The GENACIS project, conducted in 29 countries, compared gender patterns of behavior with other characteristics of these societies. Differences between countries in the level of alcohol consumption between women and men were strongly related to the position of women in society, as well as to the modernization and economic situation of the country [20].

The causes of harm associated with excessive alcohol consumption are now well understood and their effects are felt in several areas. First, there are the physiological and pathological effects of alcohol, which, at the risk of oversimplification, can be divided into the consequences of intoxication, such as injuries, violence and poisoning, and the consequences of general consumption, such as cirrhosis, cardiovascular disease and cancer. In relation to the latter, there is now a growing awareness that there is no safe level of consumption [21]. Second, there are individual-level factors such as gender [22], adverse life events and occupation [23], and genetic factors. Third, there are community-level factors such as the density of alcohol outlets and social attitudes towards alcohol consumption. There are, of course, also commercial factors, in particular the tactics adopted by the alcohol industry.

Alcohol-related harm in Europe is associated with significant costs to governments. And because of the widespread impact that alcoholism has on many aspects of our society, it is difficult to calculate these costs precisely. However, there are clear direct costs: to health care, the criminal justice system, and the working time of paramedics and police. These have a direct impact on government finances. There are also clear indirect costs: from lost productivity due to premature death, loss of quality of life for the drinker and car accidents caused by drink drivers, to higher insurance premiums. Around 25% of all road fatalities in Europe are alcohol-related, while only around 1% of the kilometres driven in Europe are by drivers with a blood alcohol level of at least 0.5 g/l [24]. Reducing alcohol consumption at the population level is a key aspect in reducing both the harm and the costs of alcohol to society. From an economic perspective, there is little convincing evidence to suggest that lower spending would harm the EU economy, but there is much evidence to suggest that reducing alcohol consumption could bring significant economic benefits.

Alcohol drinking is associated with a range of serious medical, social and legal problems that have high human and economic costs. The harmful consequences occur not only for a minority of alcoholics and heavy drinkers, but also for society as a whole. Alcohol misuse affects the most productive members of society and threatens economic stability. The devastating effects of alcohol cannot be ignored, and appropriate policy and education are essential to reduce this burden [25].

From a health perspective, some studies suggest that alcohol is responsible for around 195,000 deaths in the EU each year. However, disability-adjusted life expectancy (DALY) estimates show that the burden is slightly lower, with alcohol being responsible for 12% of premature deaths and disabilities in men and 2% in women. This, however, means that alcohol still ranks third among the twenty-six risk factors for ill health in the EU, ahead of overweight/obesity and behind tobacco and high blood pressure [1].

Results

Alcohol consumption is associated with serious economic, health and social consequences. The existing discrepancies in the method of estimation and analyses taking into account individual components prevent a reliable analysis. However, the results clearly confirm the enormous economic and social burdens and the need to implement supervisory systems in order to effectively counteract alcoholism among women. Alcohol policy has not developed to a level that would allow for appropriate control of these problems. Various preventive programs are also ineffective. Currently, special attention is paid to the large availability of alcoholic beverages, including the lack of restrictions on their sale and advertising, and falling prices, which correlates with the deepening alcohol problem among women. All the economic costs associated with this are a consequence of the lack of supervisory units in individual EU countries. Furthermore, the increased risk of falls, cognitive decline, and adverse drug interactions associated with alcohol consumption presents as a danger to the elderly.

Conclusions

The publication provides basic information on the economic aspects of alcohol consumption among women in Europe and the determinants that cause this growing economic problem. This study revealed the paucity of longitudinal data on alcohol consumption among women and its economic consequences, as well as the absence of several important variables - such as the number of life years adjusted for women with disabilities, which could help to better understand the complex situation of the alcohol problem in Europe. Additionally, the long-term health consequences of alcohol abuse, such as liver damage and cardiovascular problems, pose as a danger to the elderly, who are often more susceptible to these conditions.

Conflict of interest
none

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