

# Alcohol Consumption from a Social and Economic Perspective: A Review Study

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**BACKGROUND:** In addition to the health aspect of alcohol consumption, social and economic aspects should not be overlooked, as there is also evidence of a critical situation in these dimensions. **AIM:** The aim of the review was to point out the economic and social consequences of alcohol consumption. **DESIGN:** The study was performed on the basis of analysis and synthesis of scientific knowledge from almost 50 scientific studies. **RESULTS:** Alcohol consumption is influenced by the drinking culture, which differs from country to country and from society to society. These differences stem from social values, beliefs, and attitudes, but also public policies. The public policies should be aimed at reducing alcohol consumption in general, but in particular excessive consumption with a risk of alcohol addiction. Although alcohol consumption can be economically beneficial, its

negatives for public health, society, and economic life far outweigh any benefits. In this sense, it is possible to talk about premature mortality, poor health, alcohol-related costs, lost productivity, and crime, but also the stigmatization of consumers and their families.

**CONCLUSIONS:** The population should be educated about alcohol and its consumption should be monitored responsibly. Restrictive measures (higher taxes, advertising bans, restrictions on purchases) appear to be an effective way of reducing consumption.

**Keywords** | Alcohol Use – Dependence – Unhealthy Pattern – Drinking Culture – Social Life – Economic Life – Burden – Alcohol-Related Costs – Lost Productivity – Consequences

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## ● 1 INTRODUCTION

In general, substance abuse is accompanied by concepts such as danger, risk, or irresponsibility; therefore, it is a habit that is clearly perceived negatively. Despite public awareness of the negative aspects of substance abuse, the habit has not disappeared and the facilities that help treat addictions are fully occupied by patients (Morovicsova & Morovics, 2019). At this point, it should be pointed out that addictive substances and their forms are specific not only in terms of their effects but also the reasons for the choice of a particular substance, society's attitudes towards them or, among others, society's attitudes towards users of these substances (Kalina et al., 2015). Each addictive substance is specific and this review focuses on alcohol.

Alcohol consumption is part of many occasions and is considered a common activity that is accepted throughout many societies. This is evidenced by the fact that alcohol is commonly available and promoted in many societies and cultures. The dark side of alcohol as an addictive substance lies not only in its harmful effects on health (Rehm et al., 2003), but also economic losses (Gavurova & Tarhanicova, 2021; Laramée et al., 2013; Ranaweera et al., 2018). Drinking alcohol can be seen from several perspectives; the social and economic perspective is no less important, as the consequences are borne by society as a whole, not just individuals. This review focuses on alcohol consumption from a social and economic perspective.

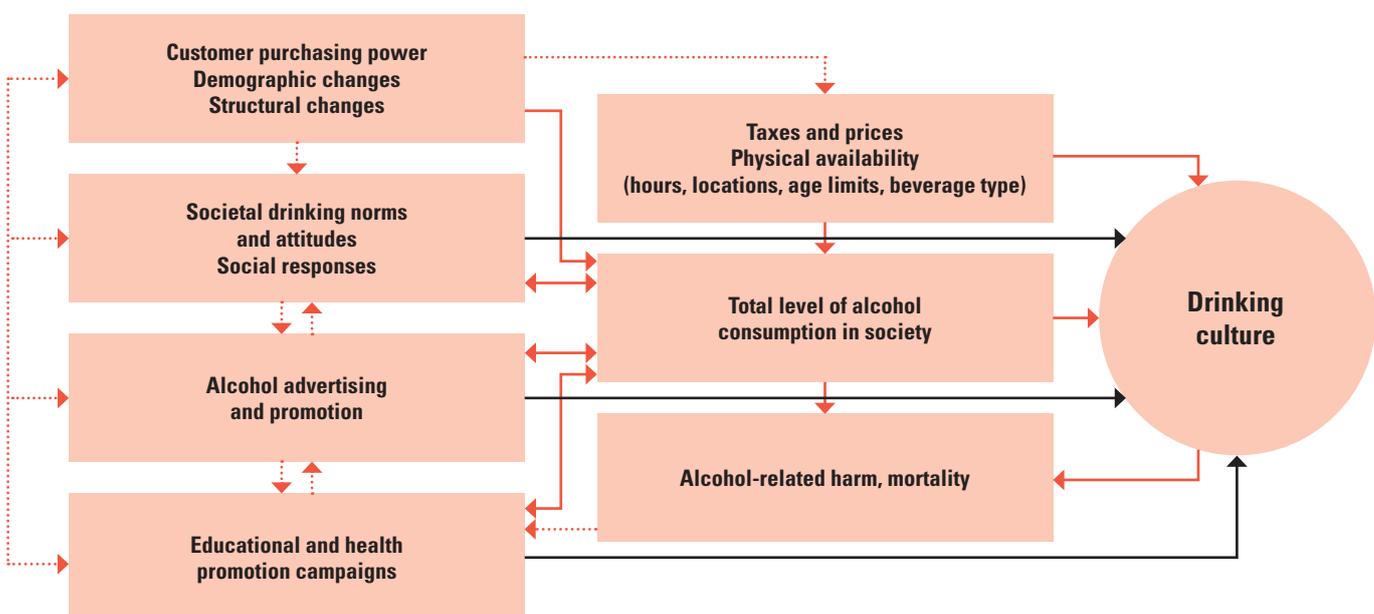
Alcohol abuse and addiction are a widespread problem that leads to a serious collision and pose a serious threat to individuals as well as to society as a whole. In addition to the health aspect of alcohol consumption, social and economic aspects

should not be overlooked, as there is also evidence of a critical situation in these dimensions. Reducing alcohol consumption therefore remains not only a public health priority, but also a social and economic priority. It is always necessary to provide information about the current state of knowledge focused on alcohol consumption from various perspectives, and this review study provides a valuable platform of findings revealing the social and economic side of alcohol consumption across the population. This knowledge can help policy makers understand the core and possible consequences of the problem, which can be useful in developing prevention programmes and strategies for society as a whole.

## ● 2 DRINKING CULTURE IN AN INTERNATIONAL CONTEXT

In the international perspective, the issue of drinking alcohol, the level of alcohol consumption, or social drinking occasions could be seen in the context of drinking cultures. One of the first studies with a focus on this was created in 1965, and in it the author describes the significant differences in drinking cultures between different countries (Mandelbau, 1965). In this regard, Savic et al. (2016) formulated a definition of drinking cultures and these authors stated that "drinking cultures are generally described in terms of the norms around patterns, practices, use-values, settings and occasions in relation to alcohol and alcohol problems that operate and are enforced (to varying degrees) in a society (macro-level) or in a subgroup within society (micro-level)". In addition to defining the drinking culture, it is necessary to know specific typologies. Various typologies are often considered in scientific studies. Aresi and

**Figure 1** | Conceptual model: relationships between factors affecting a society's drinking culture



Bloomfield (2021) performed a literature meta-analysis and provided a typology based on (i) regional differences, (ii) the dominant beverage, and (iii) wet-dry drinking. In this review, increased attention is paid to certain regional differences, emphasizing the regional typology of drinking cultures.

*Figure 1* describes the origin and changes of drinking culture through relationships with selected areas of society. There are many cross-cultural differences in the perception of alcohol consumption, with cultural beliefs, social norms, history, traditions, and religion playing an important role. In all cultures, drinking is a social activity governed by rules, self-imposed norms, and regulations that determine who can drink how much of what, when, how, in what contexts, and with what effects. These rules and norms reflect the social values, beliefs, and attitudes of different cultures. In some cultures (such as the United Kingdom, Scandinavia, the United States, and Australia), alcohol is accompanied by anti-social and violent behaviour. These cultures are also referred to as negative. Positive cultures (such as Mediterranean and some South American cultures) are dominated by harmonious and peaceful drinking. Positive cultures have significantly fewer alcohol-related problems, while negative cultures are characterized by higher levels of alcohol-related problems. Cross-cultural differences in the physical nature of public drinking-places reflect different attitudes towards alcohol. Positive cultures tend to favour more 'open' drinking environments, while negative cultures are associated with 'closed' designs (SIRC, 1998).

The positive or negative beliefs and expectancies of a given culture may change. Bloomfield et al. (2016) pointed to changes regarding the reduction of alcohol consumption as well as changes in the drinking culture in Denmark, and they emphasized that such a change could be evident in several industrialized nations. Several authors have had the ambition to explain changes in drinking culture by various indicators; Larm et al. (2018) highlighted changes in parenting style and control, Hutton et al. (2016) dealt with gendered identity changes, and Hendriks et al. (2017) focused on certain impacts of social media. Halkjelsvik et al. (2020) sought to explain the change in drinking culture among adolescents by their playing computer games, but their results led to the conclusion that computer games did not have a significant impact on the change. The authors also stated that the change in drinking culture in adolescents occurred only in a few European countries, specifically between 1995 and 2015. On the basis of the results of qualitative research among young people in Sweden, Törrönen et al. (2019) noted that drinking has undoubtedly lost its symbolic power as a result of lower peer pressure and greater awareness of adulthood, as well as awareness of the greater benefits resulting from "competing activities".

A very valuable publication in the field of changes in drinking culture is the study conducted by Rudnev and Vauclair (2018), who focused on the change from a psychological point of view. On the basis of the results of their research involving 21 countries of the European Union (EU), the authors confirmed that the country-level effects of openness to change (vs. conservation) or self-transcendence (vs. self-enhancement) were not significantly related to the frequency of drinking. On the oth-

er hand, individual-level openness to change (vs. conservation) was consistently positively associated with the frequency of drinking. From an international perspective, the authors pointed out the differences in associations between personal self-transcendence (vs. self-enhancement) and the frequency of drinking. Thus, a positive association was found in countries with a higher emphasis on extrinsic motivations, while a less positive association but also a negative association was found in countries that place more emphasis on intrinsic motivations (Rudnev & Vauclair, 2018).

### ● 3 INTERVENTION POLICIES TO SHAPE DRINKING CULTURE

The influence of national and international institutions on changes in drinking culture is of undeniable importance. One of the key documents of the European Commission (2012) identifies five fundamental principles for alcohol-related harm, which were formulated in the EU strategy to support Member States in reducing alcohol-related harm:

1. protect young people, children, and unborn children;
2. reduce injuries and deaths resulting from alcohol-related road accidents;
3. prevent alcohol-related harm among adults and reduce the negative impact on the workplace;
4. inform, educate, and raise awareness of the impact of harmful and hazardous alcohol consumption and of appropriate consumption patterns;
5. develop and maintain a common evidence base at the EU level.

Also, the document "Alcohol in Europe. A public health perspective" provides six fundamental pillars of alcohol regulation policies (European Commission 2006):

1. framework for policy (definition of alcoholic drinks; national alcohol action plan; workplace and drink-driving campaigns; school-based education);
2. risky environments (drink-driving: blood alcohol limits and enforcement; workplace restrictions; restrictions on drinking in parks and streets);
3. market restrictions (monopolies and licences for production and retail; off-licence sales restrictions – days, hours, places, density);
4. young people (minimum legal age to buy alcohol in bars; minimum age in shops);
5. marketing controls (restrictions on TV, print, or billboard adverts; sports sponsorship restrictions);
6. tax and price (alcohol tax rates for beer, wine & spirits; taxes on alcopops; link of tax to the price of alcohol).

On the basis of the above-mentioned facts, it can be concluded that the theoretical framework, which also shares much common ground with the legislation, is relatively well formed, but the implementation of policies at the national level is questionable. This fact was also pointed out by Kolarova et al. (2019), who examined the situation in the Czech Republic and stated that

prevention policies are not effective in the Czech environment. On the other hand, Baccini and Carreras (2014) examined the associations between intervention policies and alcohol drinking in 12 European countries, and heterogeneous associations were observed. The results showed that policies on restricting the availability of alcohol and on raising the minimum age for purchasing alcohol were associated with a reduction in alcohol consumption. Similar results were revealed by several other authors, while Berdzuli et al. (2020) argued that the variability of alcohol regulation policies in European countries is high. Evidence from the Russian Federation and Lithuania has shown that significant increases in alcohol taxation and the imposition of restrictions on the availability of alcohol and bans on the marketing and advertising of alcohol within short time spans appear to be effective tools for reducing alcohol consumption.

Table 1 shows selected areas of alcohol policy in European countries in terms of defining attitudes towards alcohol. In general, it is desirable for countries' leaders to make decisions to reduce problem alcohol consumption, and effective policies can help them. In the selected group of countries, the area of "Alcoholic beverage legally defined" was undoubtedly the most covered. On the contrary, the least implemented area was "Health warning labels on alcohol containers", while according to Critchlow et al. (2020), this area needs to be set up correctly in order to reflect the correct target group (people with problematic drinking). This is similar to the area of "Health warning labels on alcohol advertising". The area of "Action Plan for the implementation of alcohol policy" can be considered the most critical, as relatively many countries do not have such a plan in practice.

## ● 4 PATTERNS OF ALCOHOL CONSUMPTION IN THE WORLD

Alcohol consumption is a common but serious pattern of behaviour worldwide. For a closer look, Figure 2 shows alcohol consumption per capita and the intensity of alcohol consumption in EU countries in comparison between 2010 and 2018. At this point, it is necessary to point out the changes in individual countries, which may have been related to a change in drinking cultures. In many countries, consumption has declined over time (especially in Estonia, Croatia, Finland, Lithuania, and others), but in some it has increased (especially in Malta, Italy, Latvia, Poland, Spain, and others). This suggests that the alcohol culture needs to be seen with a country-specific emphasis. Simultaneously, alcohol preferences also play an important role in this problem. Bentzen and Smith (2018) divided 21 countries of the Organization for Economic Co-operation and Development (OECD) into three categories based on alcohol preferences: beer-dominated countries (Austria, Belgium, Denmark, Ireland, the Netherlands, the United Kingdom, the United States, Australia, New Zealand), wine-dominated countries (France, Greece, Italy, Portugal, Spain, Switzerland), and spirits-dominated countries (Finland, Norway, Sweden, Japan). The authors also revealed that these OECD countries have converged since 1960 in terms of alcohol consumption and alcohol preferences.

Kilian et al. (2021) conducted extensive primary research in 19 European countries and confirmed differences in the preferred alcoholic beverage (men preferred beer while women preferred wine) and differences in the intensity of drinking. Regarding the intensity of drinking, the authors mentioned three classes: (1) light to moderate drinking without risky single-occasion drinking (prevalence: 68.0%), (2) infrequent heavy drinking (prevalence: 12.6%), and (3) regular drinking with at least monthly risky single-occasion drinking (prevalence: 19.4%). The selected European countries were compared in these classes, and the countries with the highest percentile in the first class included Italy, Portugal, and Greece, while the countries with the lowest percentile included Ireland, the United Kingdom, and Lithuania. The second class was dominated by Lithuania and the third class by countries such as Bulgaria and Austria (Kilian et al., 2021).

In the context of the issue, it can be assumed that drinking cultures may change over time. Also, the changes vary from country to country, and the development of models to estimate, describe, and predict these changes is currently gaining in importance. Evidence of this fact is the publication of Moskalewicz et al. (2016), presenting the results of primary research in 19 EU countries, in which they described the complexity of the problem of drinking alcohol and pointed out the specific nature of individual countries regarding this issue. In general, Bulgaria and Portugal were among the countries with the highest observed proportion of the population drinking alcohol almost every day. It can also be noted that the consumption of beer and spirits was preferred in Bulgaria and the consumption of wine in Portugal. The countries with the highest levels of alcohol consumption were Bulgaria, Portugal, Spain, and Italy, while the countries with the lowest levels were Sweden, Estonia, Iceland, and Lithuania. A certain part of the drinking culture is also defined by the amount of alcohol consumed on one social occasion. In this context, the Nordic countries (Iceland, Denmark, Finland, and Sweden) displayed the highest levels of consumption. From the opposite point of view, the smallest amounts of alcohol consumed on one social occasion were measured in Portugal, Greece, Hungary, and Italy.

## ● 5 ECONOMIC PERSPECTIVE OF ALCOHOL CONSUMPTION

The economic dimension of alcohol consumption provides several perspectives on this issue. At first sight, alcohol consumption is considered a health burden, which is also reflected in several areas of economic life in individual countries. Alcohol consumption is a major risk factor for the global disease burden and causes significant health losses. According to Probst et al. (2020), diagnoses that can be fully attributed to alcohol use include the toxic effects of alcohol, ethanol, and methanol, alcoholic gastritis, alcoholic liver disease, alcoholic cirrhosis of the liver, alcoholic hepatic failure, alcohol-induced pancreatitis, the degeneration of the nervous system because of alcohol, and others. There are also many diseases that can be attributed in part to alcohol use, such as road injuries, interpersonal violence, self-harm, tuberculosis, lip and oral neoplasms, other

**Table 1** | Selected areas of alcohol policies in European countries

Location	Alcoholic beverage legally defined	Action Plan for implementation of alcohol policy	Central coordinating entity for alcohol policy implementation - HEALTH	Health warning labels on alcohol advertising	Health warning labels on alcohol containers
Albania	Yes	Yes	Yes	Yes	Yes
Andorra	Yes	Yes	No	No	No
Armenia	No			No	No
Austria	Yes	No	Yes	No	No
Azerbaijan	Yes	Yes	Yes	No	No
Belarus	Yes	Yes	Yes	Yes	Yes
Belgium	No			No	No
Bosnia and Herzegovina	Yes			No	No
Bulgaria	Yes	No	No	No	No
Croatia	Yes	No	Yes	No	No
Cyprus	Yes	Yes	No	No	No
Czechia	Yes	Yes	Yes	No	No
Denmark	Yes			No	No
Estonia	Yes	Yes	Yes	Yes	No
Finland	Yes	Yes	Yes	No	No
France	Yes	No	Yes	Yes	Yes
Georgia	No	Yes	Yes	Yes	No
Germany	Yes	No	Yes	No	No
Greece	Yes			Yes	Yes
Hungary	Yes			No	No
Iceland	Yes	No	Yes	No	No
Ireland	Yes	No	Yes	No	No
Israel	Yes	Yes	No	Yes	Yes
Italy	Yes	Yes	Yes	No	No
Kazakhstan	Yes	Yes	Yes	Yes	Yes
Latvia	Yes	Yes	Yes	Yes	No
Lithuania	Yes	Yes	Yes	Yes	No
Luxembourg	Yes			No	No
Malta	Yes			No	No
Monaco	No			No	No
Montenegro	Yes	Yes	Yes	No	No
Netherlands	Yes	No	Yes	No	No
Norway	Yes	No	Yes	No	No

Location	Alcoholic beverage legally defined	Action Plan for implementation of alcohol policy	Central coordinating entity for alcohol policy implementation - HEALTH	Health warning labels on alcohol advertising	Health warning labels on alcohol containers
Poland	Yes	No	Yes	Yes	No
Portugal	Yes	Yes	Yes	Yes	Yes
Republic of Macedonia	No	No	Yes	Yes	Yes
Republic of Moldova	Yes	Yes	Yes	Yes	No
Romania	Yes			Yes	No
Russian Federation	Yes	No	No	Yes	Yes
San Marino	No	No	Yes	No	No
Serbia	Yes			No	No
Slovakia	Yes	Yes	No	No	No
Slovenia	Yes	No	Yes	Yes	No
Spain	Yes	Yes	Yes	No	No
Sweden	Yes	No	Yes	Yes	No
Switzerland	Yes	No	Yes	No	No
Tajikistan	No	No	No	Yes	Yes
Turkey	Yes			Total ban	Yes
Turkmenistan	Yes			Yes	Yes
Ukraine	Yes			Yes	No
United Kingdom				No	No
Uzbekistan	Yes	Yes	Yes	Yes	Yes

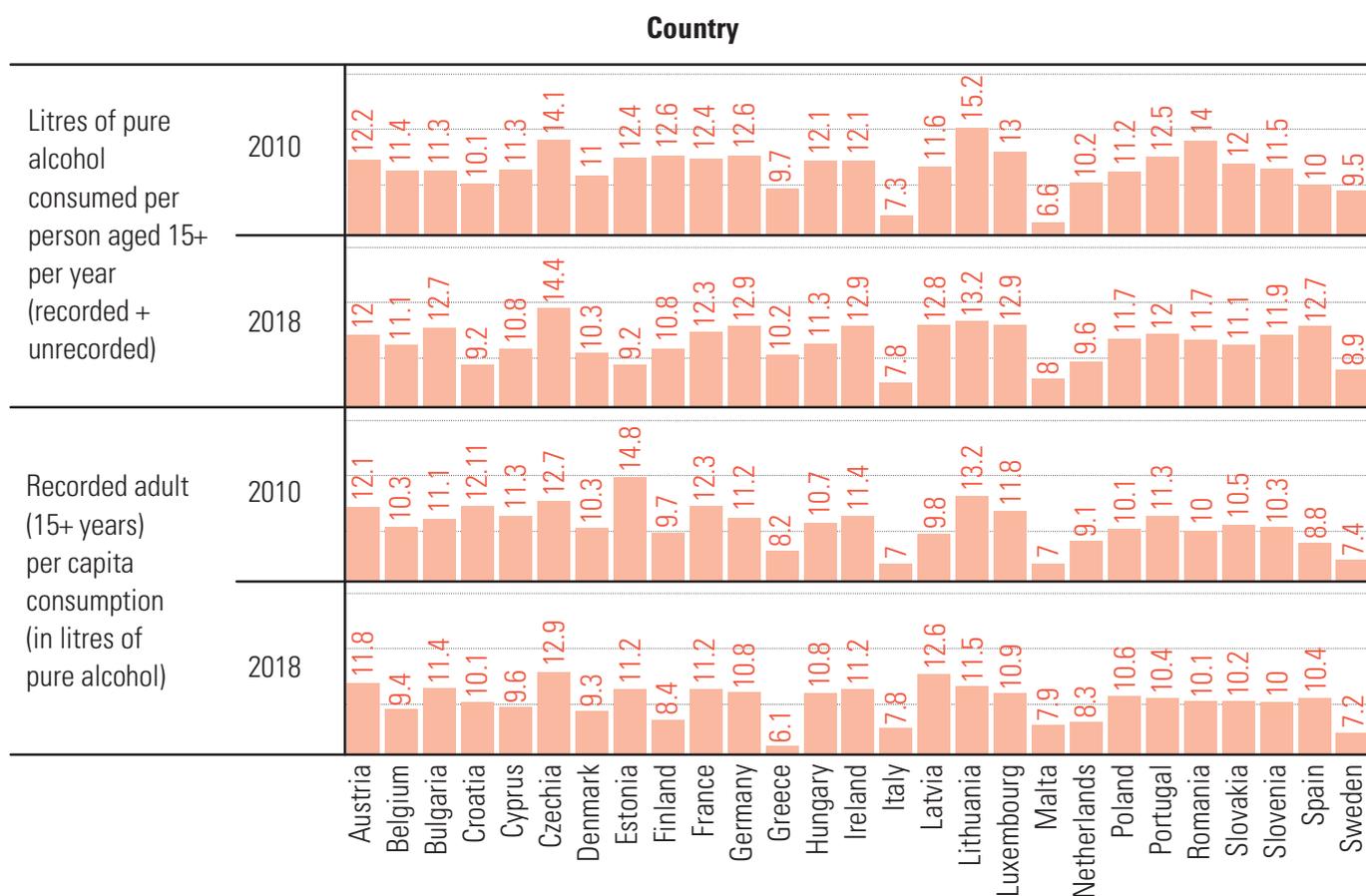
Source: authors' own processing based on data from GHO, 2021

pharyngeal cancers, laryngeal cancer, etc. In this sense, alcohol consumption is a serious risk factor for people, as it contributes adversely to their ill health status, especially when they are of working age (Kuntsche et al., 2017; Rehm et al., 2017). Evidence has also clearly shown that the risk of all-cause mortality rises with increasing levels of alcohol consumption (Griswold et al., 2018). These facts can be reflected not only in the health outcomes of countries, but also in avoidable costs and economic prosperity (Gavurova & Tarhanicova, 2021). In terms of the economic consequences of alcohol consumption, it is possible to speak of direct and indirect costs, with direct costs including all direct payments for the treatment of alcohol-related illnesses and alcohol dependence, but also non-health care costs. Indirect costs represent economic losses resulting from a reduction of available economic resources, such as loss of productivity caused by morbidity (incapacity for work resulting from ill health, missed days at work) and premature mortality (loss of the working population) (Currie, 2000).

Examples of costs associated with poor health of the population, according to Jo (2014), are the following:

- **Direct health care costs:**

- institutional inpatient care;
- institutional outpatient service;
- home health care;
- physicians' services (general practitioners, specialists);
- ancillary services;
- overheads allocated to technology;
- variable costs of utilities;
- prescription and non-prescription medications;
- devices and applications;
- diagnostic tests;
- treatment services;
- prevention services;
- rehabilitation;
- training and education.

**Figure 2** | Alcohol consumption per capita in EU countries (2010 and 2018)

Source: authors' own processing based on data from the European Commission, 2021

#### • Direct non-health care costs:

- social services (counselling, retraining);
- programme evaluation (monitoring the impact of a programme or technology, data analysis);
- repairs after destruction of property;
- legal costs;
- transportation costs;
- time (searching, travelling, waiting, etc.);
- childcare or housekeeping.

#### • Indirect costs:

- productivity losses (morbidity, mortality, impairment, job absenteeism);
- foregone leisure time;
- time spent by family and visitors attending the patient.

#### Costs associated with alcohol consumption

According to Verhaeghe et al. (2017), the main negative consequences of alcohol consumption include the costs associated with hospitalizations, disability-adjusted life years (DALYs), and premature mortality. Jyani et al. (2019) emphasized the loss of productivity and increased health care expenditure caused by poorer health, while Thavorncharoensap et al. (2010) highlighted other costs associated with drinking alco-

hol, such as damage to vehicles and property, law enforcement costs, or costs resulting from the consumption of counterfeit alcohol. Lyszczarz (2019) focused on the consumption of alcohol, alcohol-related mortality, and lost productivity in the EU and confirmed that there were significant differences between countries. The findings also showed that countries with higher levels of alcohol consumption suffer from higher total productivity losses resulting from alcohol-related mortality. At this point, the number of alcohol-related deaths in the working-age population of the EU should be taken into account when analysing alcohol-related costs, while evidence showed that Germany, Poland, and France are among the countries with the highest number of alcohol-related deaths. On the other hand, the lowest numbers were observed in countries such as Malta, Cyprus, and Luxembourg. In terms of costs, Lithuania, Estonia, and Latvia were characterized as the countries with the highest per capita costs of alcohol-related mortality, while countries such as Malta, Greece, and Italy occupied the opposite positions (Lyszczarz, 2019).

The negative effects of alcohol consumption on consumers themselves, on their families, or, more broadly, on society as a whole and on a country's economic prosperity are well known throughout society. All the above-mentioned consequences lead to the assumption of a reduction in gross domestic prod-

uct (GDP) in individual countries, while the results of several authors showed alcohol-related costs ranging from 0.04% to 1.07% of a country's annual GDP (Gavurova & Tarhanicova, 2021; Laramée et al., 2013; Ranaweera et al., 2018). Many authors have clearly pointed out these negative effects, while Sassi (2015) emphasized that alcohol-related social costs account for more than 1% of GDP in high- and middle-income countries. Laramée et al. (2013) estimated the economic costs associated with alcohol dependence in European countries at EUR 1–7.8 billion in 2012, while Gavurova and Tarhanicova (2021) estimated the total avoidable costs of alcohol consumption in the Czech Republic at USD 2.32 billion in 2017 (representing 0.66% of Czech GDP). All these findings confirm the fact that alcohol consumption leads to higher health and economic costs, which represent a huge burden for society (Manthey et al., 2016). It is also true that risky drinkers use more expensive health care services; therefore, all these facts should not be overlooked (Miquel et al., 2018). Alcohol consumption is one of the main risk factors that can be avoided, and it is therefore necessary to take measures to reduce the burden associated with alcohol consumption, to understand the position of alcohol consumers in society, and to seek to remedy the situation.

### Revenues associated with alcohol consumption

The opposite side of the problem is the economic activities generated by the production and consumption of alcohol, which provide economic incentives, such as tax revenues, sales, and distribution (Jakovljevic et al., 2017). In this context, it can be noted that EU households spent EUR 117 billion on alcoholic beverages in 2019 (equivalent to 0.8% of EU GDP), which represents 1.6% of their total consumption expenditure. At the same time, it should be emphasized that payments for alcoholic beverages in restaurants and hotels were not included in this amount (Eurostat, 2020). On this basis, the economic returns are obvious, but although alcohol consumption can be economically beneficial, its direct and indirect costs to society far outweigh any benefits (Sherk, 2020). In particular, increasing alcohol taxes and prices has the potential to reduce consumption, which can result in health benefits and a consequent reduction of premature mortality (Magnus et al., 2012). Moreover, there is also the potential to increase government revenues in this way, which could lead to an increase in public health funding (Stockwell et al., 2020; Summan et al., 2020; Vandenberg et al., 2019). These findings highlight the economic dimension of alcohol consumption, which underlines the importance of addressing this issue.

In terms of alcohol sales data, total alcohol consumption averaged 8.9 litres per person across OECD countries in 2017, and in some countries, namely Lithuania, Austria, France, the Czech Republic, and Luxembourg, the figure was more than 11 litres per person. On the other hand, the Nordic countries (Norway, Sweden, Iceland, Finland) reported amounts consumed below the OECD average (OECD, 2019). A closer look at prices shows that the Czech Republic and Germany are countries with lower beer prices (USD 0.80 and USD 0.75 per 0.5-litre bottle, respectively), while Norway, Iceland, and Finland are countries with higher beer prices (more than USD 2.90 per 0.5-litre bottle) (NUMBEO, 2021a). In addition, the Nordic countries are also characterized

by a higher price of a bottle of wine. Much higher prices can be observed in Iceland (USD 21.04) or Norway (USD 17.63) than in Hungary (USD 5.00), the Slovak Republic (USD 5.36), or the Czech Republic (USD 5.61), where alcohol consumption was higher (NUMBEO, 2021b). These facts confirm the findings mentioned above, which suggest that the higher the price, the lower the consumption of alcohol (Magnus et al., 2012; Stockwell et al., 2020; Summan et al., 2020; Vandenberg et al., 2019).

## ● 6 SOCIAL PERSPECTIVE OF ALCOHOL CONSUMPTION AND DEPENDENCE

Society generally has a negative perception of alcohol consumption as a result of the destruction of the individual and its negative consequences for the family, acquaintances, or the community as a whole. In this context, the problem of stigma cannot be forgotten. Alcohol consumers are widely stigmatized not only by society but also by themselves. As noted by Corrigan et al. (2016), society should not be indifferent to the stigma associated with alcohol use disorders; therefore, they provided two approaches to addressing the stigma divided into education and contact: “Education programs seeking to decrease the self-stigma of mental illness combine strategies of contrasting myths and facts with cognitive restructuring meant to challenge irrational self-statements that represent internalized prejudice. Contact efforts are based on assumptions that greater peer contact and support will lead to increases in empowerment and decreases in self-stigma. Strategic self-disclosure is an important element for availing peer support and promoting hope.”

As Moss (2013) pointed out, problematic alcohol use is associated with many health, psychiatric, social, and family problems. In fact, family members who are exposed to first-degree alcohol problems in relatives are at high risk of alcohol problems. For example, children of parents addicted to alcohol have a higher rate of alcoholism than children who do not have parents addicted to alcohol. On the other hand, the family plays a very important role in efforts to abstain and treat alcohol dependence. Copello et al. (2005) defined three main areas of intervention: (1) working with family members to promote the entry and engagement of substance misusers into treatment; (2) joint involvement of family members and substance-misusing relatives in the treatment of the latter; and (3) interventions responding to the needs of the family members in their own right.

The areas of society that are often mentioned in scientific studies are, in particular, crime, alcohol-related accidents, and public health. In this sense, Callaghan et al. (2016) found that lowering the age limit for the legalization of alcohol may lead to an increase in traffic offences. In contrast, Stockwell et al. (2017) revealed that raising the minimum alcohol sales threshold can reduce the incidence of road accidents in men (but not women), as well as the incidence of violent crime. On the basis of several experiments, de Vocht et al. (2020) found that with a reduction in the number of places to drink alcohol (night-clubs) and an implementation of local licensing guidance re-

stricting alcohol consumption, a reduction in crime can also be expected. These ideas have been confirmed by other authors, and Jones-Webb et al. (2021) have clearly demonstrated that restrictions on malt liquor were associated with a significant decrease in crime. Thus, reducing the availability of alcohol and consequently reducing its consumption can be considered very beneficial from a social point of view. From an economic point of view, there are concerns about the loss of sales revenue through the implementation of effective policies and the reduction of alcohol consumption (Horakova et al., 2020; Kolarova et al., 2019), but the fact still remains that restrictions on the availability of alcohol are also considered to be beneficial to public health, despite reduced economic revenues. Given the social and economic consequences, effective alcohol policies and programmes should be developed continually.

## ● 7 CONCLUSIONS

Alcohol consumption and addiction is associated with considerable costs. In the first moment of the discussion about who should bear these costs, it is necessary to point out the complexity of the problem, which is a combination of mistakes on the part of the patient and society. Thus, the idea of social responsibility should be included in the discussion on the costs of drinking alcohol and treatment. Also, alcohol producers and sellers will always strive to maximize all available sales promotion tools. They often ignore and even downplay the effects of alcohol on people's physical and mental health. Last but not least, another burdensome aspect is the fact that alcohol is still considered relatively positive in people's minds. These consequences are subsequently transformed into many aspects of life, in which the national economy and economic prosperity play a significant part. The efforts on the part of alcohol producers and sellers should be matched by the successful implementation of effective public policies. Public health institutions have an irreplaceable role in this area, and it is therefore necessary to develop effective programmes to protect societies and the health of the population from addictive substance use. It should be borne in mind that this can also lead to economic benefits in terms of eliminating the loss of productivity and alcohol-related costs.

This review emphasized several aspects of the problem. Alcohol consumption is a huge burden, as evidenced by significant economic losses. Problematic drinking affects individuals, families, and society as a whole. Although alcohol consumption can be economically beneficial, its direct and indirect costs far outweigh any benefits. The main negative consequences of alcohol consumption include premature mortality, poor health, alcohol-related costs, lost productivity, and crime, but also the

stigmatization of consumers and their families. There are clear differences in alcohol consumption levels across countries, but also in alcohol consumption patterns, alcohol preferences, and alcohol prices. The drinking culture is one of the important characteristics of countries in investigating alcohol consumption among the population. The drinking culture reflects social values, beliefs, and attitudes in societies that can be changed. Public policies also shape a drinking culture and should aim to reduce alcohol consumption per se, but in particular excessive consumption with a risk of alcohol dependence. Restrictions on the availability of alcohol are considered to benefit public health, society, and economic life, despite a reduction in the economic returns from the sale of alcohol. In the light of the findings presented in this review study, it is recommended that public policies successfully implement effective measures to promote a healthy lifestyle in order to address the health consequences of alcohol, as well as economic losses and social burdens. Implementing public measures and interventions to quit drinking for ever without being exposed to stigma appears to be one of the effective steps. It should not be forgotten that social support, family, education, and health literacy play an important role in reducing alcohol consumption across societies. Well-designed policies have great potential to change the unfavourable drinking culture in countries. Changing the drinking culture is a long-term process that requires the cooperation of public health leaders and professionals, but also educators and family members. The view of alcohol can only be changed by the joint efforts of society as a whole. This effort can be reflected not only in health benefits, but also in economic and social ones.

This issue also remains an important issue in the context of the current COVID-19 pandemic, which has disrupted people's daily routines and led to social isolation, with the risk of changes in drinking patterns throughout society.

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### Authors' contributions:

VI and BG proposed the study design. MR designed the initial form of the manuscript. VI, BG and MR conducted a survey of current knowledge and collected relevant sources. VI and MR conducted the literature review and summary of related work. BG supervised the preparation of the manuscript. All authors contributed to the article and approved the final version of the manuscript.

### Declaration of interest:

The authors declare that the study was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## REFERENCES

- Aresi, G., & Bloomfield, K. (2021). Cultural differences in alcohol consumption: The state of the art and new perspectives on drinking culture research. In R. Cooke, D. Conroy, E. L. Davies, M. S. Hagger, & O. de Visser (Eds.), *The Palgrave Handbook of Psychological Perspectives on Alcohol Consumption* (pp. 159–184). Palgrave Macmillan. [https://doi.org/10.1007/978-3-030-66941-6\\_7](https://doi.org/10.1007/978-3-030-66941-6_7)
- Baccini, M., & Carreras, G. (2014). Analyzing and comparing the association between control policy measures and alcohol consumption in Europe. *Substance Use & Misuse*, 49(12), 1684–1691. <https://doi.org/10.3109/10826084.2014.914373>
- Bentzen, J., & Smith, V. (2018). Structural changes in the consumption of beer, wine and spirits in OECD countries from 1961 to 2014. *Beverages*, 4(1), 8. <https://doi.org/10.3390/beverages4010008>
- Berdzuli, N., Ferreira-Borges, C., Gual, A., & Rehm, J. (2020). Alcohol control policy in Europe: Overview and exemplary countries. *International Journal of Environmental Research and Public Health*, 17(21), 8162. <https://doi.org/10.3390/ijerph17218162>
- Bloomfield, K., Karlsson, T., & Grittner, U. (2016). How do drinking cultures change? – or do they?: A provisional model based on evidence of transitions in Denmark. *Drugs: Education, Prevention and Policy*, 23(4), 283–292. <https://doi.org/10.1080/09687637.2016.1179719>
- Callaghan, R. C., Gatley, J. M., Sanches, M., Asbridge, M., & Stockwell, T. (2016). Impacts of drinking-age legislation on alcohol-impaired driving crimes among young people in Canada, 2009–13. *Addiction*, 111(6), 994–1003. <https://doi.org/10.1111/add.13310>
- Copello, A., Velleman, R., & Templeton, L. (2005). Family interventions in the treatment of alcohol and drug problems. *Drug and Alcohol Review*, 24(4), 369–385. <https://doi.org/10.1080/09595230500302356>
- Corrigan, P. W., Schomerus, G., Shuman, V., Kraus, D., Perlick, D., Harnish, A., Kulesza, M., Kane-Willis, K., Qin, S., & Smelson, D. (2016). Developing a research agenda for reducing the stigma of addictions, part II: Lessons from the mental health stigma literature. *The American Journal on Addictions*, 26(1), 67–74. <https://doi.org/10.1111/ajad.12436>
- Critchlow, N., Jones, D., Moodie, C., MacKintosh, A. M., Fitzgerald, N., Hooper, L., Thomas, C., & Vohra, J. (2019). Awareness of product-related information, health messages and warnings on alcohol packaging among adolescents: A cross-sectional survey in the United Kingdom. *Journal of Public Health*, 42(3), e223–e230. <https://doi.org/10.1093/pubmed/fdz080>
- Currie, G. (2000). Are cost of injury studies useful? *Injury Prevention*, 6(3), 175–176. <https://doi.org/10.1136/ip.6.3.175>
- de Vocht, F., McQuire, C., Brennan, A., Egan, M., Angus, C., Kaner, E., Beard, E., Brown, J., De Angelis, D., Carter, N., Murray, B., Dukes, R., Greenwood, E., Holden, S., Jago, R., & Hickman, M. (2020). Evaluating the causal impact of individual alcohol licensing decisions on local health and crime using natural experiments with synthetic controls. *Addiction*, 115(11), 2021–2031. <https://doi.org/10.1111/add.15002>
- European Commission. (2006). *Alcohol in Europe. A public health perspective*. [https://ec.europa.eu/health/archive/ph\\_determinants/life\\_style/alcohol/documents/alcohol\\_europe\\_en.pdf](https://ec.europa.eu/health/archive/ph_determinants/life_style/alcohol/documents/alcohol_europe_en.pdf) (accessed on 1 July 2021)
- European Commission. (2012). *Assessment of the added value of the EU strategy to support Member States in reducing alcohol-related harm*. [https://ec.europa.eu/health/sites/default/files/alcohol/docs/alcohol\\_key-doc\\_progress\\_report\\_2012.pdf](https://ec.europa.eu/health/sites/default/files/alcohol/docs/alcohol_key-doc_progress_report_2012.pdf) (accessed on 1 July 2021)
- European Commission. (2021). *Alcohol*. [https://ec.europa.eu/health/alcohol/indicators\\_en](https://ec.europa.eu/health/alcohol/indicators_en) (accessed on 1 July 2021)
- Eurostat. (2020). *How much are households spending on alcohol?* <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20201231-1?redirect=2Feurostat%2F> (accessed on 1 July 2021)
- Gavurova, B., & Tarhanicova, M. (2021). Methods for estimating avoidable costs of excessive alcohol consumption. *International Journal of Environmental Research and Public Health*, 18(9), 4964. <https://doi.org/10.3390/ijerph18094964>
- Global Health Observatory. (2021). *World Health Organization databases – Global Health Observatory data repository*. <https://www.who.int/data/gho/data/themes/global-information-system-on-alcohol-and-health> (accessed on 1 July 2021)
- Griswold, M. et al. (2018) Alcohol use and burden for 195 countries and territories, 1990–2016: A systematic analysis for the Global Burden of Disease Study 2016. *The Lancet*, 392(10152), 1015–1035. [https://doi.org/10.1016/S0140-6736\(18\)31310-2](https://doi.org/10.1016/S0140-6736(18)31310-2)
- Halkjelsvik, T., Brunborg, G. S., & Bye, E. K. (2020). Are changes in binge drinking among European adolescents driven by changes in computer gaming? *Drug and Alcohol Review*, 40(5), 808–816. <https://doi.org/10.1111/dar.13226>
- Hendriks, H., Gebhardt, W. A., & van den Putte, B. (2017). Alcohol-related posts from young people on social networking sites: content and motivations. *Cyberpsychology, Behavior, and Social Networking*, 20(7), 428–435. <https://doi.org/10.1089/cyber.2016.0640>
- Horakova, M., Bejtkovsky, J., Baresova, P., & Urbanek, T. (2020). Alcohol consumption among the member states of the European Union in relationship to taxation. *Adiktologie*, 20(1–2), 47–56. <https://doi.org/10.35198/01-2020-001-0004>
- Hutton, F., Griffin, C., Lyons, A., Niland, P., & McCreanor, T. (2016). “Tragic girls” and “crack whores”: Alcohol, femininity and Facebook. *Feminism & Psychology*, 26(1), 73–93. <https://doi.org/10.1177/0959353515618224>
- Jakovljevic, M., Varavikova, E. A., Walter, H., Wascher, A., Pejic, A. V., & Lesch, O. M. (2017). Alcohol beverage household expenditure, taxation and government revenues in broader European WHO region. *Frontiers in Pharmacology*, 8, 303. <https://doi.org/10.3389/fphar.2017.00303>
- Jo, C. (2014). Cost-of-illness studies: Concepts, scopes, and methods. *Clinical and Molecular Hepatology*, 20(4), 327–337. <https://doi.org/10.3350/cmh.2014.20.4.327>
- Jones-Webb, R., Joshi, S., Erickson, D., McKee, P., Nelson, T., & Toomey, T. (2021). The effectiveness of alcohol impact areas in reducing crime in Washington neighborhoods. *Alcoholism: Clinical and Experimental Research*, 45(1), 234–241. <https://doi.org/10.1111/acer.14509>
- Jyani, G., Prinja, S., Ambekar, A., Bahuguna, P., & Kumar, R. (2019). Health impact and economic burden of alcohol consumption in India. *International Journal of Drug Policy*, 69, 34–42. <https://doi.org/10.1016/j.drugpo.2019.04.005>
- Kalina, K. et al. (2015). *Klinická adiktologie*. Grada.
- Kilian, C., Manthey, J., Kraus, L., Mäkelä, P., Moskalewicz, J., Sieroslawski, J., & Rehm, J. (2021). A new perspective on European drinking cultures: A model-based approach to determine variations in drinking practices among 19 European countries. *Addiction*, 116(8), 2016–2025. <https://doi.org/10.1111/add.15408>
- Kolarova, E., Homola, D., Kolarova, V., & Kramna, E. (2019). Analysis of substance use and its relation to the tax policy of the Czech Republic. *Adiktologie*, 19(1), 27–34. <https://doi.org/10.35198/01-2019-001-0003>
- Kuntsche, E., Kuntsche, S., Thrul, J., & Gmel, G. (2017). Binge drinking: Health impact, prevalence, correlates and interventions. *Psychology & Health*, 32(8), 976–1017. <https://doi.org/10.1080/08870446.2017.1325889>
- Laramee, P., Kusel, J., Leonard, S., Aubin, H.-J., Francois, C., & Daepfen, J.-B. (2013). The economic burden of alcohol dependence in Europe. *Alcohol and Alcoholism*, 48(3), 259–269. <https://doi.org/10.1093/alcalc/agt004>
- Larm, P., Livingston, M., Svensson, J., Leifman, H., & Raninen, J. (2018). The increased trend of non-drinking in adolescence: The role of parental monitoring and attitudes toward offspring drinking. *Drug and Alcohol Review*, 37(S1), S34–S41. <https://doi.org/10.1111/dar.12682>
- Lyszczarz, B. (2019). Production losses associated with alcohol-attributable mortality in the European Union. *International Journal of Environmental Research and Public Health*, 16(19), 3536. <https://doi.org/10.3390/ijerph16193536>
- Magnus, A., Cadilhac, D., Sheppard, L., Cumming, T., Pearce, D., & Carter, R. (2012). The economic gains of achieving reduced alcohol consumption targets

- for Australia. *American Journal of Public Health*, 102(7), 1313–1319. <https://doi.org/10.2105/ajph.2011.300453>
- Manthey, J., Laramée, P., Parrott, S., & Rehm, J. (2016). Economic burden associated with alcohol dependence in a German primary care sample: A bottom-up study. *BMC Public Health*, 16(1), 906. <https://doi.org/10.1186/s12889-016-3578-8>
- Miquel, L., Manthey, J., Rehm, J., Vela, E., Bustins, M., Segura, L., Vieta, E., Colom, J., Anderson, P., & Gual, A. (2018). Risky alcohol use: The impact on health service use. *European Addiction Research*, 24(5), 234–244. <https://doi.org/10.1159/000493884>
- Morovicsova, E., & Morovics, M. T. (2019). The alcoholism treatment centre in Bratislava-Dúbravka – Its establishment and operation. *Adiktologie*, 19(2), 95–104. <https://doi.org/10.35198/01-2019-002-0005>
- Moskalewicz, J., Room, R., & Thom, B. (2016). *Comparative monitoring of alcohol epidemiology across the EU – Baseline assessment and suggestions for future action. Synthesis report*. PARPA – The State Agency for Prevention of Alcohol Related Problems. <http://www.rarha.eu/NewsEvents/LatestNews/Lists/LatestNews/Attachments/36/Comparative%20monitoring%20of%20of%20alcohol%20epidemiology%20across%20the%20EU%20E2%80%93%2027.02.pdf> (accessed on 1 July 2021)
- Moss, H. B. (2013). The impact of alcohol on society: A brief overview. *Social Work in Public Health*, 28(3–4), 175–177. <https://doi.org/10.1080/19371918.2013.758987>
- NUMBEO. (2021a). *Prices by country of domestic beer (0.5 liter bottle) (Markets)*. [https://www.numbeo.com/cost-of-living/prices\\_by\\_country.jsp?displayCurrency=USD&itemId=15](https://www.numbeo.com/cost-of-living/prices_by_country.jsp?displayCurrency=USD&itemId=15) (accessed on 1 July 2021)
- NUMBEO. (2021b). *Prices by country of bottle of wine (mid-range) (Markets)*. [https://www.numbeo.com/cost-of-living/prices\\_by\\_country.jsp?displayCurrency=USD&itemId=14](https://www.numbeo.com/cost-of-living/prices_by_country.jsp?displayCurrency=USD&itemId=14) (accessed on 1 July 2021)
- Organisation for Economic Co-operation and Development. (2019). Alcohol consumption among adults. In: *Health at a Glance 2019: OECD Indicators*. OECD Publishing. <https://doi.org/10.1787/961753cf-en>
- Probst, C., Kilian, C., Sanchez, S., Lange, S., & Rehm, J. (2020). The role of alcohol use and drinking patterns in socioeconomic inequalities in mortality: A systematic review. *The Lancet Public Health*, 5(6), e324–e332. [https://doi.org/10.1016/s2468-2667\(20\)30052-9](https://doi.org/10.1016/s2468-2667(20)30052-9)
- Ranaweera, S., Amarasinghe, H., Chandraratne, N., Thavorncharoensap, M., Ranasinghe, T., Karunaratna, S., Kumara, D., Santatiwongchai, B., Chaikledkaew, U., Abeykoon, P., & De Silva, A. (2018). Economic costs of alcohol use in Sri Lanka. *Plos One*, 13(6), e0198640. <https://doi.org/10.1371/journal.pone.0198640>
- Rehm, J., Gmel, G. E., Gmel, G., Hasan, O. S. M., Imtiaz, S., Popova, S., Probst, C., Roerecke, M., Room, R., Samokhvalov, A. V., Shield, K. D., & Shuper, P. A. (2017). The relationship between different dimensions of alcohol use and the burden of disease – an update. *Addiction*, 112(6), 968–1001. <https://doi.org/10.1111/add.13757>
- Rehm, J., Gmel, G., Sempos, C. T., & Trevisan, M. (2003). Alcohol-related morbidity and mortality. *Alcohol Research & Health: The Journal of the National Institute on Alcohol Abuse and Alcoholism*, 27(1), 39–51.
- Room, R., Osterberg, E., Ramstedt, M., & Rehm, J. (2009). Explaining change and stasis in alcohol consumption. *Addiction Research & Theory*, 17(6), 562–576. <https://doi.org/10.3109/16066350802626966>
- Rudnev, M., & Vaclair, C. M. (2018). The link between personal values and frequency of drinking depends on cultural values: A cross-level interaction approach. *Frontiers in Psychology*, 9, 1379. <https://doi.org/10.3389/fpsyg.2018.01379>
- Sassi, F. (2015). *Tackling harmful alcohol use: Economics and public health policy*. OECD Publishing. <https://doi.org/10.1787/9789264181069-en>
- Savic, M., Room, R., Mugavin, J., Pennay, A., & Livingston, M. (2016). Defining “drinking culture”: A critical review of its meaning and connotation in social research on alcohol problems. *Drugs: Education, Prevention and Policy*, 23(4), 270–282. <https://doi.org/10.3109/09687637.2016.1153602>
- Sherk, A. (2020). The alcohol deficit: Canadian government revenue and societal costs from alcohol. *Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice*, 40(5–6), 139–142. <https://doi.org/10.24095/hpcdp.40.5/6.02>
- Social Issues Research Centre. (1998). *Social and Cultural Aspects of Drinking*. [http://www.sirc.org/publik/social\\_drinking.pdf](http://www.sirc.org/publik/social_drinking.pdf) (accessed on 1 July 2021)
- Stockwell, T., Churchill, S., Sherk, A., Sorge, J., & Gruenewald, P. (2020). How many alcohol-attributable deaths and hospital admissions could be prevented by alternative pricing and taxation policies? Modelling impacts on alcohol consumption, revenues and related harms in Canada. *Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice*, 40(5–6), 153–164. <https://doi.org/10.24095/hpcdp.40.5/6.04>
- Stockwell, T., Zhao, J., Sherk, A., Callaghan, R. C., Macdonald, S., & Gatley, J. (2017). Assessing the impacts of Saskatchewan’s minimum alcohol pricing regulations on alcohol-related crime. *Drug and Alcohol Review*, 36(4), 492–501. <https://doi.org/10.1111/dar.12471>
- Summan, A., Stacey, N., Birckmayer, J., Blecher, E., Chaloupka, F. J., & Laxminarayan, R. (2020). The potential global gains in health and revenue from increased taxation of tobacco, alcohol and sugar-sweetened beverages: A modelling analysis. *BMJ Global Health*, 5(3), e002143. <https://doi.org/10.1136/bmjgh-2019-002143>
- Thavorncharoensap, M., Teerawattananon, Y., Yothasamut, J., Lertpitakpong, C., Thitiboonsuwan, K., Neramitpitagkul, P., & Chaikledkaew, U. (2010). The economic costs of alcohol consumption in Thailand, 2006. *BMC Public Health*, 10(1), 323. <https://doi.org/10.1186/1471-2458-10-323>
- Törrönen, J., Roumeliotis, F., Samuelsson, E., Kraus, L., & Room, R. (2019). Why are young people drinking less than earlier? Identifying and specifying social mechanisms with a pragmatist approach. *International Journal of Drug Policy*, 64, 13–20. <https://doi.org/10.1016/j.drugpo.2018.12.001>
- Vandenberg, B., Jiang, H., & Livingston, M. (2019). Effects of changes to the taxation of beer on alcohol consumption and government revenue in Australia. *International Journal of Drug Policy*, 70, 1–7. <https://doi.org/10.1016/j.drugpo.2019.04.012>
- Verhaeghe, N., Lievens, D., Annemans, L., Vander Laenen, F., & Putman, K. (2017). The health-related social costs of alcohol in Belgium. *BMC Public Health*, 17(1). <https://doi.org/10.1186/s12889-017-4974-4>