Alcohol Labelling: Czech Expert Perspectives and Recommendations

Kloučková, K.[1], **Barták, M.**[1,2]

1 | Charles University, First Faculty of Medicine, Department of Addictology, Prague, Czech Republic
2 | General University Hospital in Prague, Department of Addictology, Prague, Czech Republic

Citation | Kloučková, K. & Barták, M. (2025). Alcohol Labelling: Czech Expert Perspectives and Recommendations. *Adiktologie, 25*(4), 181–190

INTRODUCTION: Consumption of alcohol has significant influence on the physical and mental health of the Czech population. Nevertheless, public awareness of alcohol-related consequences in the Czech Republic remains inadequate. One potential and promising strategy for increasing awareness and promoting prevention is the labelling of alcoholic beverages, which could serve as an educational tool for consumers. The aim of the present study was to find positive or negative consensus among experts in the Czech Republic regarding statements and recommendations on alcohol labelling and its potential implementation. **METHODS:** The data collection process was executed through the utilisation of a modified Delphi method, encompassing two rounds of questioning. Following the second round of questioning, areas of consensus, disagreement, and neutrality were identified. The sample size comprised 44 experts in the initial round of questioning and 32 experts in the subsequent round. **RESULTS:** In the second round of questioning, positive agreement was reached for 23 statements (100%) regarding alcohol labelling, while 12 of them (52%) achieved 100% consensus. No recommendations were categorized as neutral or in disagreement. **CONCLUSION:** It has been established by experts in the Czech Republic that the implementation of effective alcohol labelling is a very effective way to raise awareness of the potential risks associated with alcohol. The findings emphasise the necessity for adjustments to existing labelling mechanisms and the incorporation of warning messages on alcohol containers. The study provides a basis for future research and policy decisions in this area.

Keywords | **Alcohol - alcohol labelling - Czech Republic - international comparison**

Submitted | April 13, 2025 **Accepted |** October 9, 2025

Grant affiliation | none

Corresponding author | Mgr. Kateřina Kloučková, Charles University, First Faculty of Medicine, Department of Addictology, Apolinářská 447/4A, 128 00 Prague, Czech Republic **klouckovakaterina1@gmail.com**

1 INTRODUCTION

The Czech Republic has been identified as a country with both high average per capita alcohol consumption and a high incidence of binge drinking (Office of the Government of the Czech Republic, 2022). Moreover, alcohol has been classified as one of the most risky carcinogens by the International Agency for Research on Cancer (World Health Organization, 2023). Alcohol consumption is a contributing factor to premature deaths, injuries, diseases and, often overlooked, the intake of calories among consumers (Hobin et al., 2022). The consequences of alcohol consumption extend beyond health problems, encompassing mental and social implications. However, awareness of these risks remains relatively low in society (Kokole et al., 2021). A review of 32 studies since 2018 reports that although public awareness of the link between alcohol and health (and other) problems varies across countries, only less than half of respondents correctly identified the link between alcohol and cancer in most studies (Scheideler & Klein, 2018). This finding has been confirmed in several recent studies (Vallance et al., 2020; Calvert et al., 2021; Thomsen et al., 2020).

A significant problem is that alcohol is perceived as an integral part of social, family, festive and everyday events and celebrations without sufficient awareness of the risks of its consumption (Office of the Government of the Czech Republic, 2022). This is a social attitude and a Central European tradition that is typical especially for the Czech Republic, Germany and also Great Britain. With a certain national pride, the consumption and production of beer is particularly associated with Czechia (Csémy, 2006).

One approach that has the potential to raise awareness of the risks associated with alcohol consumption is product labelling (Kokole et al., 2021). A label is defined as a sticker or graphic on the product packaging containing the name of the product or other detailed information. Its primary functions include identification, promotion, and description (Kotler & Keller, 2013). The existing evidence indicates that health warnings on alcohol bottle labels are an effective tool for increasing risk awareness, slowing consumption, and reducing alcohol purchases and actions associated with alcohol consumption (Stafford & Salmon, 2017; Hobin et al., 2020; Zhao et al., 2020).

The results of the studies indicate that exposure to cancer-related warning labels led to a decline in alcohol consumption, while exposure to warning labels emphasizing the health risks associated with alcohol consumption in general resulted in a reduction in alcohol consumption and purchases (Kokole et al., 2021). In accordance with the findings of López-Olmedo et al. (2023), the placement of visible health warnings on alcohol products has a potential to prompt individuals to think about the health risks associated with alcohol consumption, thereby reducing their appeal and diminishing interest in purchasing and consuming alcohol (Barták et al., 2023).

The final report of the „Alkohol pod kontrolou“ 2023 project states that cans of alcoholic beverages with health warnings are perceived as less attractive compared to cans without warnings. Furthermore, statistical analyses indicate that the likelihood of buying and consuming from a can with a warning label is statistically significantly lower than from a can without a warning label. Research has also demonstrated that warnings on cans can influence the perception of the risks associated with alcohol consumption. The findings indicate that respondents exposed to warning labels on cans were more inclined to concur with statements pertaining to health risks, including the assertion that heart disease is more prevalent among individuals with a high alcohol consumption, and that even a modest reduction in alcohol intake can lower the risk of developing liver disease and certain forms of cancer. Conversely, individuals exposed to cans bearing health warnings were found to be less inclined to concur with the assertion that alcohol can confer health benefits for most individuals when consumed in moderation. The findings of this study imply that health warnings on cans can effectively raise awareness of the risks associated with alcohol consumption and potentially influence decisions about alcohol purchase and consumption (Barták et al., unpublished).

The implementation of changes to labelling and packaging has been a pivotal strategy in raising awareness of the associated health risks and in the reduction of tobacco consumption. There is a substantial body of evidence supporting the impact of tobacco product packaging on reducing consumption (McNeill et al., 2017). Comprehensive health warning labels on tobacco products have been shown to influence social norms, improve awareness and reduce consumption by users. Research has estimated that the financial savings from reduced tobacco product consumption among pregnant women due to graphic warnings about the harms of smoking have ranged from $1.2 to $2.0 billion over 30 years (Tauras et al., 2017). The potential of effective health warning designs on products to outperform exposure to any other public health or alcohol campaign has been identified (World Health Organization, 2022). However, evidence suggests that health warnings on alcohol bottle labels do not influence consumers´ purchasing behaviour (Clarke et al., 2021), and have a limited effect on reducing alcohol consumption during pregnancy, as long as consumers do not register or understand the warnings (Dumas et al., 2018).

The discrepancies in the effectiveness of health warnings are affected by different criteria and methods. The important question is whether the warnings were intended to raise awareness of health risks or to influence consumer behaviour. Additionally, the format, scope, and time horizon over which the effects of the intervention (i.e. the health warning) are measured are crucial factors (World Health Organization, 2021). The warning must be sufficiently visible, comprehensible, persuasive, credible, and relevant. There are numerous factors that influence consumer attention, including characteristics of the label; the size, placement, colours, images or signal words of the warning, such as ‘warning’, have been identified as important (Coomber et al., 2015; Critchlow et al., 2020). When evaluating the efficacy of health warnings, it has been demonstrated that certain warnings are more effective than others. For instance, the size of warnings has been observed to influence product ratings, with larger warnings being more likely to reduce positive product ratings than smaller warnings. Furthermore, positively worded warnings have been found to be more credible than those that use intimidation (Clarke et al., 2021). Furthermore, blue has

been identified as a colour that is generally associated with lower health risks in comparison to, for example, red (World Health Organization, 2021).

Visual elements, i.e., graphics, photographs, images or abstract symbols, have proven to be effective in capturing the attention of consumers and conveying the necessary information. The utilisation of pictograms has been shown to overcome barriers related to literacy or education, thereby ensuring their appeal to individuals irrespective of their educational background or linguistic skills. Research has shown that the incorporation of pictograms into text-based warnings enhances the level of attention paid to the warning, compared to text without visual elements. Furthermore, studies demonstrated that less realistic labels with images, such as graphic (abstract) depictions of organs, are more effective in capturing consumer attention and influencing evaluation without evoking a negative response (Clarke et al., 2021; Pechey et al., 2020; World Health Organization, 2021).

In the field of alcohol labelling, recent legislative changes illustrate how lessons from tobacco control are being adapted to address alcohol-related harms. In Australia and New Zealand, a new law was passed in 2020, requiring an inclusion of warnings about harmful alcohol consumption during pregnancy on all packaged alcoholic beverages with an alcohol content above 1.15%. In addition to textual warnings, pictograms should be present on larger containers of alcohol (World Health Organization, 2021). France requires pregnancy warnings on all alcoholic beverage containers since 2007. Producers must label each container either with a warning text or with a pictogram showing a pregnant woman drinking alcohol crossed out by a red line (Millot et al., 2022).

In Thailand, a requirement for textual warnings on alcoholic beverages has been in place since 2003. Since 2010, efforts have been made to introduce graphic warnings similar to those used on tobacco products (World Health Organization, 2022; Barta & Passariello, 2010; Lester, 2010).

Ireland has set a precedent as the first European Union (EU) country to mandate comprehensive health warnings on all alcoholic products from 2028, including warnings on the risks of cancer, after postponing the original implementation date of 2026 (World Health Organization, 2023; Alcohol Action Ireland, 2025). These warnings form a part of a comprehensive strategy that also encompasses minimum unit pricing, regulation of advertising and marketing, and a separation of alcohol from other products in retail outlets (Slattery, 2024). Further developments in this area are captured in a study from 2025 published by the World Health Organization (WHO, 2025).

Within the EU, the primary regulatory framework governing food labelling is delineated by the Regulation (EU) No 1169/2011, which stipulates the mandatory inclusion of essential information, including ingredients and nutritional declarations, on food labels. However, alcoholic beverages with an alcohol content of more than 1.2% by volume are exempted from this obligation, while non-alcoholic or low-alcohol beverages must provide this information. The EU permits the implementation of voluntary self-regulation in this domain, when some countries have instituted their own requirements, including health warnings on alcohol consumption during pregnancy. The regulation stipulates that alcoholic beverages with an alcohol content of more than 10% do not have to indicate a minimum shelf life, and only the 14 most common allergens must be listed on the label (Laaninen, 2021; Centres for European Policy Network, 2023).

It is imperative that consumers are furnished with the relevant information to enable them to reach an informed decision regarding the purchase or use of a product. Public institutions are obliged to ensure that consumers are equipped with the necessary information (World Health Organization, 2019).

The principal objective of this study was to analyse the views of experts in the Czech Republic, and to identify possible areas of agreement or disagreement regarding the labelling of alcoholic beverages.

2 METHODS

2.1 DATA COLLECTION AND ANALYSIS

A modified Delphi method was used for the collection of data. This technique involves using the subjective opinions of a group of individuals (experts) to find a common consensus on the present or future (Wildemuth, 2017). The method consists in repeated questioning with feedback on the previous round so that the experts can change their opinions. In this research, two rounds of questionnaire completion were carried out. The modification of the Delphi method consisted in conducting only two rounds of questioning; our intention was to find a consensus among experts, rather than, as is usual in a standard Delphi study, to also monitor whether this consensus was more permanent, which is usually done using a third and fourth round of questioning. A similar approach was used, for example, in a study by Fanta et al. from 2025 (see Fanta et al., 2025). The statistical group response is defined as the acceptable intersection of individuals' opinions in the final round (Dalkey, 1969).

Data both from the expert panel and public representatives were collected through an online questionnaire. Respondents were invited to record their level of agreement with each statement/recommendation on a Likert scale with four response options: agree, somewhat agree, somewhat disagree, disagree. The recommendations were based on data from the Overview of Library of Alcohol Health Warning Labels (Eurocare, 2013). The questionnaire items were specifically aimed at the effectiveness and regulatory framework of alcohol labelling, the content and placement of health warnings, and at examples of specific statements and recommendations (see also WHO, 2022, and more recently WHO, 2025).

In the second round, respondents were invited to indicate their level of agreement with the same statements as in the initial round. However, in this round, respondents were also presented with the responses of other experts (respondents were anonymous). After the initial and subsequent Delphi rounds, separate analyses were conducted. Respondents were presented with the opportunity to revise their initial responses based on the results of the initial round, which may have facilitated the establishment of a consensus.

The degree of agreement and disagreement was then calculated. The calculation of the agreement rate was conducted using the following formula: agreement rate = (agree + strongly agree) / (strongly disagree + disagree + neither agree nor disagree). An analogous procedure was applied to calculate the disagreement rate. The items were then divided (categorised) into three domains based on the level of agreement:

1) The area of agreement (characterised by a rate of 70% or more)

2) The area of disagreement (characterised by a rate of 70% or more)

3) Neutral area (remaining)

Kriss McGill, in his paper for the University of Edinburgh (2021), states that there is no standardised method or level of agreement that should be reached, but 70% or more is commonly used to indicate agreement.

The study findings, based on the analysis of experts' opinions on alcoholic beverage labelling, have identified areas of consensus and divergence. The study has also identified recommendations for labelling based on these areas of agreement and disagreement

2.2. SAMPLE

Fourty-four respondents participated in the first round of data collection, and 32 respondents participated in the second round.

Purposive sampling was utilised to select the research population (sample). This selection method is neither random nor representative. An expert panel was drawn from respondents who met the criteria set by the researchers:

- The respondents belong to the addiction professional community (e.g. people working in addiction services, at the Department of Addictology).
- At least five years of experience in the field of addiction (clinical work or research)
- Self-assessment as a professional/expert
- Willingness to participate in a two-round questioning

In addition to addictologists, the expert group included representatives of public administration (health, agriculture, finance). The relevant criteria for inclusion were as follows:

- A relevant educational background and position within the organisation (i.e. those who are responsible for the agenda, and have the authority to make decisions about it)
- A minimum of one year's experience in the position
- Willingness to participate in a two-round questioning

Contact has been made with regional and municipal anti-drug coordinators, the Ministry of Health, the Ministry of Education, Youth and Sports, the Office of the Government, and the National Institute of Public Health.

2.3. ETHICAL CONSIDERATIONS

Participation in the research study was entirely voluntary, and all data collected was anonymised. By completing the questionnaire, respondents agreed to the use of their anonymous data. It was ascertained that no harm or detriment would befall the respondents. The study protocol was submitted to the Ethics Committee of the Department of Addiction Medicine for approval (EKSKAD-008/2024).

The ethical considerations of the research encompass the assessment of the respondents' expertise. The selection of the research population is contingent on the respondents' criteria, which is an important component. This approach ensures that only individuals with the necessary expertise are included in the study, which prevents any manipulation of the definition of expertise.

3. RESULTS

Fifty-one experts participated in the first round of the Delphi study. Seven respondents were excluded from the subsequent data analysis, because they did not meet the criteria of expertise defined by the researcher. The final analysis included 44 responses from the first round of questioning. In the second round of the Delphi study, 32 responses were analysed (20 women, 12 men). The respondents met the predefined criteria of expertise. Among these 32 respondents, 22 were from the addiction professional community, while 10 represented public administration with the focus on the addiction/alcohol policy.

Table 1 | Consensus results

	Round 1		Round 2		Overall result	
	No. of recommendations	%	No. of recommendations	%	No. od recommendations	%
Positive Agreement	22	96	23	100	23	100
Negative Agreement	0	0	0	0	0	0
No Agreement	1	4	0	0	0	0
Total	23	100	23	100	23	100

Table 1 presents the primary outcome, which is the categorization of recommendations into groups based on consensus. It includes the results of both the first and the second rounds, as well as the overall outcome (a combination of both round results). It is evident that, in the first round of the survey, experts did not reach consensus on one recommendation (4.3%), while all other recommendations achieved positive agreements. No recommendation resulted in a negative agreement. In the second round, the collective opinion of the experts was unanimous, with all 23 recommendations (100%) receiving a positive consensus rating.

Table 2 presents results of agreement levels for individual recommendations and statements related to labelling of alcoholic beverages in the first and second round of the Delphi study.

Table 2 | The level of agreement for individual recommendations

Statement/recommendation	Positive agreement and its rate (%) in Round 1	Positive agreement and its rate (%) in Round 2
Part 1		
Labeling of alcoholic beverages is an effective tool for disseminating information and raising awareness about the risks associated with alcohol consumption.	Yes (84 %)	Yes (97 %)
Health warnings should be displayed on all labels of alcoholic beverages.	Yes (95 %)	Yes (94 %)
Labeling rules should be unified for all types of alcohol.	Yes (98 %)	Yes (94 %)
Labeling rules should be standardized across countries.	Yes (93 %)	Yes (100 %)
Voluntary commitments by the alcohol industry (self-regulation) are insufficient for ensuring the quality of alcohol labeling.	Yes (93 %)	Yes (100 %)
Part 2		
Health warnings on alcohol labels should be separated from other information (e.g., placed within a framed box with a bold border).	Yes (98 %)	Yes (100 %)
Health warnings should be placed in a standardized location on the container.	Yes (95 %)	Yes (100 %)
The text of health warnings should be at least as large as other information on the label.	Yes (95 %)	Yes (100 %)
The text of health warnings should be placed on a contrasting background (e.g., red text on a white background).	Yes (98 %)	Yes (97 %)
The text of health warnings should be written in the official language of the country where the product is sold.	Yes (98 %)	Yes (100 %)
Labels should include pictograms warning about the effects of alcohol.	Yes (98 %)	Yes (100 %)
Alcoholic beverage labels should include information on composition and nutritional values.	Yes (90 %)	Yes (97 %)
Alcoholic beverage labels should include information on the quantity of standard alcohol doses per container, as defined by the National Institute of Public Health (SZÚ).	Yes (90 %)	Yes (100 %)
Alcoholic beverage labels should contain information regarding alcohol consumption regulations (e.g., restrictions for drivers, cyclists, or in public spaces):	Yes (88 %)	Yes (94 %)
Part 3		
Labels on alcohol containers should include warnings:		
"Alcohol can harm an unborn child."	Yes (98 %)	Yes (100 %)
"Do not serve alcohol to minors."	Yes (90 %)	Yes (100 %)
"Alcohol slows reaction time – do not drink before or while driving."	Yes (95 %)	Yes (100 %)
"Alcohol consumption may cause liver cirrhosis."	Yes (90 %)	Yes (94 %)
"Alcohol consumption may cause mental health issues.	Yes (90 %)	Yes (97 %)
"Do not drink alcohol while operating machinery."	Yes (81 %)	Yes (88 %)
"Alcohol consumption may cause cancer."	Yes (77 %)	Yes (81 %)
„Alcohol consumption may cause addiction."	Yes (98 %)	Yes (100 %)
„Ministry of Health warning: Alcohol harms health.“	No (68 %)	Yes (88 %)

Table 2 also displays the full statements/descriptions of the recommendations. A positive consensus was achieved for all statements/recommendations in the second round. The highest level of agreement in the second round of questioning reached 100%, which was observed in 12 out of 23 (52%) recommendations.

The lowest level of agreement was recorded for the following statements:

„The Ministry of Health warns: Alcohol harms health."

„Alcohol consumption may cause cancer."

A 100% agreement rate (Round 2) was recorded for:

Recommendations regarding design.

Labelling rules should be unified for all types of alcohol.

Labelling rules should be standardized across countries

Voluntary commitments by the alcohol industry (self-regulation) are insufficient for ensuring the quality of alcohol labelling.

Labels on alcoholic beverages should include information on the quantity of standard alcohol doses per container, as defined by the National Institute of Public Health (SZÚ[12]).

„Alcohol can harm an unborn child."

„Alcohol consumption may cause addiction."

Table 1: Consensus results

Table 2: The level of agreement for individual recommendations

4. DISCUSSION

The present study sought to analyse the consensus and contradictions among experts regarding the recommendations for the labelling of alcoholic beverages. To this end, a modified Delphi method was employed for data collection, with the objective of identifying the consensus among experts (Wildemuth, 2017). The recommendations were based on data from the Overview of Library of Alcohol Health Warning Labels (Eurocare, 2013).

There was a high degree of consensus among the experts that labelling of alcoholic beverages increases risk awareness, delays consumption, and reduces purchases, which is consistent with the findings of studies by Stafford & Salmon (2017), Hobin et al. (2020), and Zhao et al. (2020). Jones et al. (2022a, 2022b) and Morgenstern et al. (2021) report that labelling can effectively serve to educate about the health effects of alcohol. Furthermore, the experimental findings by Weerasinghe et al. (2020) demonstrate that increased consumer awareness can contribute to the formulation of effective regulatory policies in this area.

The findings indicate a consensus among experts on the necessity of uniform and mandatory health warnings on all alcoholic beverage labels, aligning with the recommendations put forth by the World Health Organization (2023, 2021). Research has also demonstrated that self-regulation of the alcohol industry is not an effective measure. This assertion was corroborated by Sherk et al. (2020). The industry exhibits a clear reluctance to embrace mandatory labelling measures, favouring instead the adoption of QR codes as a substitute for conventional labelling methods (Brewers Assoc of Australia, 2018).

In the second round of the Delphi study, the majority of the recommendations concerning warning design were met with unanimous consent. It aligns with studies showing that the effectiveness of warnings is enhanced by the use of bold fonts, contrast, colours and pictograms (WHO, 2021). The efficacy of pictorial warnings has been demonstrated to exceed that of text-based warnings (Grummon et al., 2023), and the configuration and positioning of labels have been identified as crucial factors (Edmunds et al., 2023). However, it has been demonstrated that strong visual warnings have the capacity to elicit negative emotional reactions and a boomerang effect (Ma & Ma, 2023).

Research has confirmed that labels should disclose the composition and nutritional values of alcohol, as alcohol consumption influences dietary patterns and contributes to energy intake. Alcohol contains 7.1 kcal/g, which classifies it as a significant risk factor for obesity (Tolstrup et al., 2005; Schröder et al., 2007; Wannamethee et al., 2005; Wang et al., 2010)., Alcohol accounts for an average of 16% of total energy intake among adult drinkers in the USA (Nielsen et al., 2012). The research findings also suggest that labels should indicate the amount of alcohol in grams or standard doses, as is already the case in Australia and New Zealand (WHO, 2021), and as is planned to be introduced in Ireland from 2028 (Alcohol Action Ireland, 2025). This recommendation was further supported by an analysis conducted by Giesbrecht et al. (2023), who argues that consumers have a right to easily accessible information about the alcohol content of products.

The study findings underscore a substantial support for warnings concerning the consequences of alcohol consumption during pregnancy, aligning with Ireland's decision to implement health warnings emphasising this issue (eISB, 2023) and the 1988 Alcoholic Beverage Labeling Act (ABLA) in the USA. This act stipulates obligatory warnings concerning the risk of birth defects and the consequences of driving under the influence of alcohol. The findings of our study confirm that these measures are also in line with the opinions of experts in the field.

The statement "Do not serve alcohol to minors" received unanimous agreement from experts who considered this warning to be of significant importance. The consumption of alcohol by

1 Anderson, P., Gual, A., & Colom, J. (2005). *Alkohol a primární zdravotní péče: Klinická vodítka pro identifikaci a krátké intervence.* (I. Suchardová, Překl.; H. Sovinová & L. Csémy, Příprava české verze). Department of Health of the Government of Catalonia. Dostupné z: http://www.phepa.net

2 Komárek, L. et al. (2007). *Hodnocení spotřeby alkoholu: Konzumace alkoholu–specifikace jednotky.* Státní zdravotní ústav. https://archiv.szu.cz/tema/podpora-zdravi/hodnoceni-spotreby-alkoholu

individuals under the legal drinking age has been associated with an elevated risk of mortality, injury, violence, and addiction (SAMHSA, 2014, 2022; Waterman et al., 2019). Furthermore, alcohol has been shown to have a detrimental effect on brain development (Squeglia et al., 2015; Pfefferbaum et al., 2018). To mitigate these concerns, effective measures have been proposed, including the prohibition of alcohol sales to individuals under the legal drinking age and the implementation of mandatory warnings (National Institutes of Health, 2024).

The warning "Alcohol can cause liver cirrhosis" has received a high level of support from experts in the field, who consider it to be a desirable measure. These findings are consistent with Ireland's decision to implement health warnings about liver disease on alcoholic beverage labels from 2028, in conjunction with nutritional information and alcohol content in grams (eISB, 2023; Alcohol Action Ireland, 2025). While Ireland considers warnings on the link between alcohol and cancer to be crucial, the results of this study demonstrate less consensus among experts on this particular issue. Nevertheless, the warning was included in the consensus area as it has a potential to raise awareness of alcohol risks and its implementation is desirable (Hobin et al., 2020).

The findings of this study underscore the need for labels to include not only the physical but also the mental risks associated with alcohol consumption, given the prevailing lack of consumer awareness of these effects (WHO, 2021; Kokole et al., 2021). The experts expressed support for the warnings which were evaluated by Eurocare (2013) as being among the most significant: "Alcohol can cause mental health problems," which attained a high level of agreement, and the statement "Alcohol can cause addiction," which received unanimous support. However, Grummon et al. (2023) found that warnings about addiction may be perceived by consumers as less discouraging than other health warnings.

The utilisation of a comparable strategy for the labelling of alcohol products has been proven by previous experience with warnings on tobacco products (Yau et al., 2022). The statement "Ministry of Health warns: Alcohol is harmful to health" was initially regarded as neutral in Round 1, yet it was subsequently categorised as a subject that elicited a consensus in Round 2. Research by Grummon et al. (2023) indicates that "general warning" labels are perceived by a proportion of consumers as the most discouraging.

4.1. STRENGTHS AND LIMITATIONS

The research contributes to the creation of evidence-based alcohol policy by identifying both agreements and disagreements among experts regarding the labelling of alcohol beverages in the Czech Republic. The results obtained can serve as a basis for the development of more effective labelling and health warnings on alcoholic beverages.

Like any other study, this one also has its limitations. Given the nature of the research sample selection, the group of experts is not entirely representative of the entire addiction treatment community in the Czech Republic. Although we tried to reach out to all stakeholder groups, some professional groups were unevenly represented, which limits the generalizability of the findings. Another limitation of the study concerns the different composition of respondents in both rounds of interviews, which may have influenced the outcomes and introduced selection bias. Furthermore, as in many Delphi studies, there is a potential risk of groupthink, where consensus may be shaped by dominant opinions rather than a balanced evaluation of all viewpoints. In addition, the study relied primarily on foreign literary sources, which may have introduced translation bias and affected the interpretation of some concepts. These factors should be taken into account when assessing the transferability of the results to wider expert communities in a policy context.

Future research could expand the sample size to include a more diverse group of respondents, including consumers, and use interactive studies to explore preferences in warning design.

5. CONCLUSIONS

In the present study, the expert panel reached a consensus on the claims made about the labelling of alcoholic beverages. The results of this study can serve as a basis for policymakers in the ongoing debate on reducing the harmful effects on alcohol use in the Czech Republic.

Acknowledgement

This article is based on a master thesis defended at Charles University, First Medical Faculty, Department of Addiction Medicine, prepared and supervised by the authors of the article.

This study/contribution was created within the framework of Specific University Research project No. 260-758.

We acknowledge the grant financial support from the Office of the Government of the Czech Republic, AA-00-20, Alcohol under control 2.1, in 2023, and from the Charles University Cooperation Programme, scientific field Health Sciences, in 2024 and 2025.

Authors contributions:

KK: Conceptualization, manuscript preparation, data collection

MB: Conceptualization, supervision, method design

Declaration of interest: This section will be completed after the peer-review process.

REFERENCES

Alcohol Action Ireland. (2025). Consequences of alcohol labelling delay will be felt by ordinary Irish people every day [Press release]. https://alcoholireland.ie/press-release-consequences-of-alcohol-labelling-delay-will-be-felt-by-ordinary-irish-people-every-day/

Alcohol and Tobacco Tax and Trade Budeau. (2024). Alcoholic Beverage Labelling Act Penalty [internet]. https://www.ttb.gov/laws-regulations-and-public-guidance/other/penalties

Barta P, Passariello, C. (2010). Global liquor makers fight graphic labels in Thailand.

Barták, M. a kol. (2023). Závěrečná zpráva projektu Alkohol pod kontrolou 2.1 v roce 2023. Praha, Klinika Adiktologie 1. LF UK unpuplished.

Brewers Association of Australia. (2018). Submission No 53 to the Department of Health, Draft National Alcohol Strategy 2018–2026 [internet]. https://www.brewers.org.au/wp-content/uploads/2020/12/files_351.pdf

Calvert, C.M.; Toomey, T.; Jones-Webb, R. (2021). Are people aware of the link between alcohol and different types of Cancer? BMC Public Health, 21, 1–10. Dostupné z: [Google Scholar] [CrossRef] [PubMed]

Centres for European Policy Network. (2023). *Alcohol Labelling in the EU.* cepInput. https://www.cep.eu/fileadmin/user_upload/cep.eu/Studien/cepInput_Alcohol_Labelling/cepInput_Alcohol_Labelling_in_the_EU.pdf

Clarke, N., Blackwell, A. K. M., De-Loyde, K., Pechey, E., Hobson, A., Pilling, M., Morris, R. W., Marteau, T. M., & Hollands, G. J. (2021). Health warning labels and alcohol selection: a randomised controlled experiment in a naturalistic shopping laboratory. *Addiction (Abingdon, England)*, *116*(12), 3333–3345. https://doi.org/10.1111/add.15519

Coomber, K., Martino, F., Barbour, I. R., Mayshak, R., & Miller, P. G. (2015). Do consumers 'Get the facts'? A survey of alcohol warning label recognition in Australia. *BMC public health*, *15*, 816. Dostupné z: https://doi.org/10.1186/s12889- 015-2160-0

Critchlow, N., Jones, D., Moodie, C., MacKintosh, A. M., Fitzgerald, N., Hooper, L., Thomas, C., & Vohra, J. (2020). 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 (Oxford, England)*, *42*(3), e223–e230. Dostupné z: https://doi.org/10.1093/pubmed/fdz080

Csémy, L. (2006). V prevenci alkoholismu je nejdů ležitější vzor rodičů . Rodina a škola. Sv. 53, 1. https://profeseonline.upol.cz/pdfs/pol/2021/01/10.pdf

Dalkey, N. C. (1969). *The Delphi Method: An Experimental Study on Group Opinion.* The Rand Corporation.

Dumas, A., Toutain, S., Hill, C., & Simmat-Durand, L. (2018). Warning about drinking during pregnancy: lessons from the French experience. *Reproductive health*, *15*(1), 20. https://doi.org/10.1186/s12978-018-0467-x

Edmunds, C. E. R., Gold, N., Burton, R., Smolar, M., Walmsley, M., Henn, C., Egan, M., Tran, A., Harper, H., Dale, M. K., Brown, H., Londakova, K., Sheron, N., & Greaves, F. (2023). The effectiveness of alcohol label information for increasing knowledge and awareness: a rapid evidence review. *BMC public health*, *23*(1), 1458. https://doi.org/10.1186/s12889-023-16327-x

Eurocare. *Overview of Library of Alcohol Health Warning labels.* (2013). Committee on National Alcohol Policy and Action. https://health.ec.europa.eu/system/files/2016- 11/ev_20130522_co10_en_0.pdf

Fanta, M., Barták, M., & Rogalewicz, V. (2025). Beyond effectiveness: Barriers and solutions for implementing brief alcohol interventions in primary care in Czechia. Alcohol and Drug Addictions / Alkohol i Narkomania, 38(1). https://doi.org/10.5114/ain.2025.154122

Grummon, A. H., Ruggles, P. R., Greenfield, T. K., & Hall, M. G. (2023). Designing Effective Alcohol Warnings: Consumer Reactions to Icons and Health Topics. *American journal of preventive medicine*, *64*(2), 157–166. https://doi.org/10.1016/j.amepre.2022.09.006

Hobin, E., Jansen, R., Vanderlee,. L., & Berenbaum, E. (2022). *Enhanced alcohol container labels: A systematic review.* Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. https://www.ccsa.ca/sites/default/files/2022-02/CCSA-Enhanced- Alcohol-Container-Labels-Systematic-Review-Report-en.pdf

Hobin, E., Schoueri-Mychasiw, N., Weerasinghe, A., Vallance, K., Hammond, D., Greenfield, T. K., McGavock, J., Paradis, C., & Stockwell, T. (2020). Effects of strengthening alcohol labels on attention, message processing, and perceived effectiveness: A quasi-experimental study in Yukon, Canada. *The International journal on drug policy*, *77*, 102666. https://doi.org/10.1016/j.drugpo.2020.102666

Jones, D., Moodie, C., Purves, R. I., Fitzgerald, N., & Crockett, R. (2022a). Alcohol Packaging As a Promotional Tool: A Focus Group Study With Young Adult Drinkers in Scotland. *Journal of studies on alcohol and drugs*, *83*(4), 565–573.

Jones, D., Moodie, C., Purves, R. I., Fitzgerald, N., & Crockett, R. (2022b). The role of alcohol packaging as a health communications tool: An online cross-sectional survey and experiment with young adult drinkers in the United Kingdom. *Drug and alcohol review*, *41*(5), 1206–1215. https://doi.org/10.1111/dar.13469

Kloučková, K. (2024). Labelling alkoholických nápojů: situace a perspektivy v České republice [1. lékařská fakulta, Karlova Univerzita]. Digitální depozitář Karlovy Univerzity. https://dspace.cuni.cz/bitstream/handle/20.500.11956/193841/120485266.pdf?sequence=1&isAllowed=y

Kokole, D., Anderson, P., & Jané-Llopis, E. (2021). Nature and Potential Impact of Alcohol Health Warning Labels: A Scoping Review. *Nutrients*, *13*(9), 3065. https://doi.org/10.3390/nu13093065

Komárek, L. et al. (2007). Hodnocení spotřeby alkoholu: Konzumace alkoholu-specifikace jednotky. *Státní zdravotní ústav. https://archiv.szu.cz/tema/podpora-zdravi/hodnoceni-spotreby-alkoholu*

Kotler, P., Keller, K. L. (2013). *Marketing management.* 14. vyd. Praha: Grada Publishing. ISBN 9788024785707.

Laaninen, T. (2021). Alcohol labelling, European Parliament Briefing, p. 2-3. https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690563/EPRS_BRI(2021)690563_EN.pdf

Lester, S. (2010). More on Thai Liquor Labelling. https://ielp.worldtradelaw.net/2010/11/more-on-thail-liquor-labeling/

López-Olmedo, N., Muciño-Sandoval, K., Canto-Osorio, F. *et al.* (2023). Warning labels on alcoholic beverage containers: a pilot randomized experiment among young adults in Mexico. *BMC Public Health* 23, 1156. https://doi.org/10.1186/s12889-023-16069- w

Ma, Z., & Ma, R. (2023). Designing Cancer Warning Labels for Alcoholic Beverages: Examining the Impact of Visual Elements. *Health education & behavior : the official publication of the Society for Public Health Education*, *50*(5), 586–594. https://doi.org/10.1177/10901981231166696

McGill, K. (2021). Blog-The Delphi Method: trying to get experts to agree on anything is a nightmare. The university of Edinburgh. https://www.ed.ac.uk/usher/advanced- care-research-centre/news/blog-the-delphi-method

McNeill, A., Gravely, S., Hitchman, SC., Bauld, L., Hammond, D., Hartmann-Boyce, J. (2017). Tobacco packaging design for reducing tobacco use. *Cochrane Database of Systematic Reviews*; (4).

Millot, A., Serra, M., & Gallopel-Morvan, K. (2022). How the alcohol industry fought against pregnancy warning labels in France. A press

coverage analysis spanning 20 years. *Frontiers in public health*, *10*, 933164. https://doi.org/10.3389/fpubh.2022.933164

Morgenstern, M., Dumbili, E. W., Hansen, J., & Hanewinkel, R. (2021). Effects of alcohol warning labels on alcohol-related cognitions among German adolescents: A factorial experiment. *Addictive behaviors*, *117*, 106868. https://doi.org/10.1016/j.addbeh.2021.106868

National Institutes of Health (NIH). Wernicke-Korsakoff Syndrome. https://www.ninds.nih.gov/health-information/disorders/wernicke-korsakoff- syndrome

Nielsen, SJ., Kit,. BK, Fakhouri, T., Ogden, CL. (2012). Calories consumed from alcoholic beverages by US adults, 2007–2010. *NCHS Data Brief*;110:1–8 https://www.ncbi.nlm.nih.gov/pubmed/23384768

Pechey, E., Clarke, N., Mantzari, E., et al. (2020). Image-and-text health warning labels on alcohol and food: potential effectiveness and acceptability. *BMC Public Health;* 20(1): 376.

Pfefferbaum, A., Kwon, D., Brumback, T., Thompson, WK., Cummins, K., Tapert, SF., Brown, SA., Colrain, IM., Baker, FC., Prouty, D., De Bellis, MD., Clark, DB., Nagel, BJ., Chu, W., Park, SH., Pohl, KM., Sullivan, EV. (2018). Altered brain developmental trajectories in adolescents after initiating drinking. *Am J Psychiatry*;175(4):370–80. PubMed PMID: 29084454

SAMHSA, CBHSQ. (2014). The DAWN Report: Alcohol and drug combinations are more likely to have a serious outcome than alcohol alone in emergency department visits involving underage drinking. Rockville, MD: SAMHSA; https://www.samhsa.gov/data/sites/default/files/spot143-underage-drinki...

SAMHSA. (2022). National Survey on Drug Use and Health. Table 2.8B—Alcohol use in lifetime, past year, and past month: among people aged 12 or older; by detailed age category, percentages, 2021 and 2022. Center for Behavioral Health Statistics and Quality (CBHSQ) [Internet]. https://www.samhsa.gov/data/sites/default/files/reports/rpt42728/NSDUHDetaile dTabs2022/NSDUHDetailedTabs2022/NSDUHDetTabsSect2pe2022.htm#tab2.8b

Scheideler, J.K.; Klein, W.M.P. (2018). Awareness of the Link between Alcohol Consumption and Cancer across the World: A Review. Cancer Epidemiol. Biomark. 27, 429–437. Dostupné z: [Google Scholar] [CrossRef][Green Version]

Schröder, H., Morales-Molina, JA., Bermejo, S., Barral, D., Má ndoli, ES., Guxens, M. et al. (2007). Relationship of abdominal obesity with alcohol consumption at population scale. *Eur J Nutr*; 46(7):369–76 (https://www.ncbi.nlm.nih.gov/ pubmed/17885722)

Sherk A., Thomas G., Churchill S., Stockwell T. (2020). Rethinking low-risk drinking guidelines through a psychosocial availability lens: a reply to Nason (2020) and Braillon (2020). *J Stud Alcohol Drugs*, 81: 830–832.

Slattery, C. (2024). How Ireland beat the odds to introduce cancer warning labels on alcohol. *World Cancer Research Fund International.* https://www.wcrf.org/how- ireland-beat-the-odds-to-introduce-cancer-warning-labels-on-alcohol/

Squeglia, LM., Tapert, SF., Sullivan, EV., Jacobus, J., Meloy, MJ., Rohlfing, T., Pfefferbaum, A. (2015). Brain development in heavy-drinking adolescents. *Am J Psychiatry*;172(6):531–42, 2015. PubMed PMID: 25982660.

Stafford, L. D., & Salmon, J. (2017). Alcohol health warnings can influence the speed of consumption. *Zeitschrift fur Gesundheitswissenschaften = Journal of public health*, *25*(2), 147–154. Dostupné z: https://doi.org/10.1007/s10389-016-0770-3

Tauras, JA., Peck, RM., Cheng, KW., Chaloupka, FJ. (2017). Graphic Warning Labels and the Cost Savings from Reduced Smoking among Pregnant Women. *Int J Environ Res Public Health*; 14(2).

Thomsen, K.L.; Christensen, A.S.P.; Meyer, M.K.H. (2020). Awareness of alcohol as a risk factor for cancer: A population-based cross-sectional study among 3000 Danish men and women. Prev. Med. Rep. 19, 101156. Dostupné z: [Google Scholar] [CrossRef]

Tolstrup, JS., Heitmann, BL., Tjønneland, AM., Overvad, OK., Sørensen, TI., Grønbaek, MN. (2005). The relation between drinking pattern and body mass index and waist and hip circumference. *Int J Obes (Lond)*;29(5):490–7 (https://www.ncbi.nlm.nih. gov/pubmed/15672114)

Office of the Government of the Czech Republic [Úřad vlády České republiky]. (2022, 29.03.). *Alkohol- dobrý sluha nebo zlý pán?* [Tisková zpáva]. https://www.alkohol-skodi.cz/data/obj_files/11755/684/TZ_2022-03- 29_Alkohol%20-%20dobrý%20sluha%20nebo%20zlý%20pán_fin.pdf .

Vallance, K.; Stockwell, T.; Zhao, J.; Shokar, S.; Schoueri-Mychasiw, N.; Hammond, D.; Greenfield, T.K.; McGavock, J.; Weerasinghe, A.; Hobin, E. (2020). Baseline Assessment of Alcohol-Related Knowledge of and Support for Alcohol Warning Labels Among Alcohol Consumers in Northern Canada and Associations With Key Sociodemographic Characteristics. J. Stud. Alcohol Drugs, 81, 238–248. Dostupné z: [Google Scholar] [CrossRef] [PubMed]

Wang, L., Lee, I-M., Manson, JE., Buring, JE., Sesso, HD. (2010). Alcohol consumption, weight gain, and risk of becoming overweight in middle-aged and older women. *Arch Intern Med;170(5):453–61. https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC2837522*

Wannamethee, SG., Shaper, AG., Whincup, PH. (2005). Alcohol and adiposity: effects of quantity and type of drink and time relation with meals. *Int J Obes (Lond)*;29(12):1436– 44 (https://www.ncbi.nlm.nih.gov/pubmed/16077718)

Waterman, E. A., Lee, K. D. M., & Edwards, K. M. (2019). Longitudinal Associations of Binge Drinking with Interpersonal Violence Among Adolescents. *Journal of youth and adolescence*, *48*(7), 1342–1352. https://doi.org/10.1007/s10964-019-01035-w

Weerasinghe, A., Schoueri-Mychasiw, N., Vallance, K., Stockwell, T., Hammond, D., McGavock, J., Greenfield, T. K., Paradis, C., & Hobin, E. (2020). Improving Knowledge that Alcohol Can Cause Cancer is Associated with Consumer Support for Alcohol Policies: Findings from a Real-World Alcohol Labelling Study. *International journal of environmental research and public health*, *17*(2), 398. https://doi.org/10.3390/ijerph17020398

Wildemuth, B. M. (2017). *Applications of social research methods to questions in information and library science.* California : Libraries Unlimited

World Health Organization. (2019). *Uplatnění iniciativy WHO SAFER pro snížení škod souvisejících s alkoholem v České republice: Politická doporučení.* http://alkoholpodkontrolou.cz/wp- content/uploads/2022/11/WHO_policy_brief_alcohol_CZ_19-12-03_print-1.pdf

World Health Organization. (2021). *Health Warning Labels on Alcoholic beverages*. Snapshot series on alcohol control policies and practice. https://iris.who.int/bitstream/handle/10665/352519/9789240044449-eng.pdf?sequence=1

World Health Organization. (2022). *Health warning labels on alcoholic beverages: opportunities for informed and healthier choices*. (Snapshot series on alcohol control policies and practice. Brief 4, 8 November 2021). Geneva: World Health Organization.

World Health Organization. (2023) *No level of alcohol consumption is safe for our health.*https://www.who.int/europe/news/item/04-01-2023-no-level-of-alcohol- consumption-is-safe-for-our-health

World Health Organization. (2023). What's in the bottle: Ireland leads the way as the first country in the EU to introduce comprehensive health labelling of alcohol products. News release. https://www.who.int/europe/news/item/26-05-2023-what-s-in-the- bottle--ireland-leads-the-way-as-the-first-country-in-the-eu-to-introduce- comprehensive-health-labelling-of-alcohol-products

World Health Organization, Regional Office for Europe. (2025). *Alcohol health warning labels: A public health perspective for Europe*. WHO Regional Office for Europe.

Yau, M. T. K., Yau, K. W., Hussaini, T., & Yoshida, E. M. (2022). A Narrative Review of the Efficacy and Design of Safety Labels on Tobacco Products

to Promote the Use of Safety Labels on Alcohol Products in Canada. *Cureus*, *14*(5), e25306. https://doi.org/10.7759/cureus.25306

Zhao, J., Stockwell, T., Vallance, K., & Hobin, E. (2020). The Effects of Alcohol Warning Labels on Population Alcohol Consumption: An Interrupted Time Series Analysis of Alcohol Sales in Yukon, Canada. *Journal of studies on alcohol and drugs*, *81*(2), 225–237.

LIST OF LEGAL NORMS

Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004 Text with EEA relevance

S.I. No. 249/2023 - Public Health (Alcohol) (Labelling) Regulations 2023 (eISB, 2023)