

# The Finnish Drinking Habits Survey: Implications for alcohol policy and prevention

**Katariina Warpenius**

Finnish Institute for Health and Welfare, Alcohol, Drugs and Addictions Unit,  
Helsinki, Finland

**Pia Mäkelä** 

Finnish Institute for Health and Welfare, Alcohol, Drugs and Addictions Unit,  
Helsinki, Finland

## Abstract

**Aims/materials:** This reflection piece reviews some of the key results and conclusions from the book *Näin Suomi juo (This is how Finns drink, 2018)*, based on the Finnish Drinking Habits Survey. Our aim was to go through the results taking the perspective of prevention workers and policymakers: how could they benefit from the scientific findings when tackling alcohol-related harm? **Results/reflections:** The reflections displayed in this article provide some useful arguments and justifications for population-level alcohol policy in the controversial alcohol policy debate. Harms do not only arise among the heaviest drinkers, and efficient methods to prevent harm may be found among the prevention efforts that apply to populations rather than only to the heaviest drinkers. The article also illustrates how the results from a population survey can be used in order to identify specific challenges and solutions for alcohol prevention in a given population. The results help in identifying the population groups and situations with an elevated risk of alcohol-related harm and in characterising the drinking patterns and social situations in which drinking takes place in these vulnerable parts of the population. **Conclusions:** The review illustrates that a many-sided understanding of alcohol consumption and the related harm, based on survey results, is more far-reaching in terms of prevention and policy than a knowledge base built solely on register

Submitted: 30 June 2020; accepted: 15 July 2020

## Corresponding author:

Katariina Warpenius, Finnish Institute for Health and Welfare, Alcohol, Drugs and Addictions Unit, P.O. Box 30, Helsinki, FI 00271, Finland.

Email: [katariina.warpenius@thl.fi](mailto:katariina.warpenius@thl.fi)



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

data on the development of alcohol consumption and harm. For example, the respondents' drinking patterns are linked not only to their attitudes and risk perceptions but also to what people consider to be appropriate means to reduce alcohol use and the related harm in terms of alcohol policy, informal social control and people's life management.

## Keywords

alcohol, alcohol policy, drinking habits, harm, prevention

As we know, alcohol is not an ordinary commodity, as its excessive consumption causes harm to drinkers themselves, other people and society (Babor et al., 2010). Nonetheless, in Finland, like in other countries with a relatively high level of alcohol consumption, there are contradictory views on the best ways to prevent alcohol-related harm and to manage the risks of drinking. Scientific evidence on alcohol consumption and harm may be useful in these debates but research results may remain abstract in terms of preventing alcohol-related harm. For example, survey-based research articles on alcohol consumption and the related harm often conclude that the results presented are relevant to prevention and policy but they rarely go into what this actually means in practice in any depth.

In Finland, a whole book of survey results on Finns' drinking patterns, alcohol-related harms and attitudes towards drinking was published in 2018: *Näin Suomi juo (This is how Finns drink)*; Mäkelä et al., 2018). The book was mainly based on the Finnish Drinking Habits Survey (FDHS), a general population survey carried out in 2016. The central findings from the point of view of what has happened to Finnish drinking have been summarised in the current issue of this journal (Tigerstedt et al., 2020, in this issue).

In this reflection piece, we aimed to go through the FDHS results presented in the book, taking the perspective of prevention workers and policymakers. In other words, considering all of the main findings, how could a policy-maker or a prevention worker benefit from

them when tackling alcohol-related harm? The observations may be rather familiar to people who are acquainted with the research literature, but we hope they open perspectives on the debates on how to reduce alcohol consumption and the related harm in effective and feasible ways, and we hope this review of the results will serve colleagues who need to translate survey results into policy-relevant messages.

On the one hand, the results and conclusions displayed in this reflection piece provide some useful arguments and justifications for population-level alcohol policy in the controversial alcohol policy debate. On the other hand, our reflection piece illustrates how the results from a population survey can be used to identify specific challenges and solutions for prevention in a given population. All in all, our aim is to point out that this kind of many-sided understanding, based on survey data, cannot only be obtained on the basis of generic statistics on the development of alcohol consumption and the related harm.

## The population-level prevention of alcohol-related harm

Although per capita alcohol consumption has decreased in Finland since 2007, the level of alcohol consumption is still high, and various types of alcohol-related harm still affect many Finns (see Tigerstedt et al., 2020, in this issue). The self-reported harms covered in the FDHS are, on average, relatively mild compared to the severe harm that is the object of register studies, such as alcohol-related deaths or hospitalisations. On the whole, only a relatively small

proportion of respondents reported experiencing alcohol-related harm caused by their own drinking (7.5% of the 3.6 million Finns aged 15–79 years), but at the population level, the numbers are still large and a further need for preventive efforts is obvious. In the population of 5.5 million people in Finland, at least 270,000 Finns had experienced problems resulting from their own alcohol use in at least one area of life during the previous year, such as health or economic problems, or problems at home or with one's partner. Almost 900,000 Finns (24%) had experienced harms associated with alcohol intoxication even when not counting the most common one (i.e., regrets over something said or done). In total, in the 12 months previous to the survey, at least 440,000 Finns (12%) had been advised by someone close to them or in healthcare to reduce their alcohol consumption, which can be considered a sign of alcohol-related problems (Härkönen et al., 2018). Because the figures from the FDHS underestimate the use of alcohol by Finns, the prevalence of alcohol-related problems may actually be even higher.

At the population level, the majority of the harm reported by the survey participants resulted from the drinking of “ordinary alcohol consumers”, who in Finnish drinking culture tend to engage in hazardous drinking from time to time even if their long-term alcohol consumption level is moderate. So even if heavy drinkers at the *individual level* experience more numerous and more severe harms compared to other drinkers, for many types of harm, it is the case that only a relatively small proportion of all harms at the *population level* arise among heavy drinkers (Mäkelä, 2018a). These include harms for which the risk is increased even at a low level of drinking, such as alcohol-induced cancers, as well as injuries related to intoxication. For many other types of harm (e.g., alcohol psychosis), it is clear that really heavy drinking is required before the risk of that harm increases. However, based on follow-up studies it has been possible to conclude that current heavy drinkers will only account for a minority

of all the severe alcohol-induced harms that will occur in registers for the whole population in the forthcoming years (Mäkelä & Paljärvi, 2008).

As the harms and risks from drinking affect large groups of people, it is not appropriate to target prevention and harm reduction efforts at the heaviest drinkers only – additionally, universal measures of alcohol policy, such as price and availability measures, are justified (Mäkelä, 2018a). According to reviews of scientific evidence, such alcohol policy measures are also effective ways to promote public health, well-being and safety (Babor et al., 2010; Giesbrecht & Bosma, 2017). They reduce the number of heavy drinkers at the population level and prevent other alcohol consumers from becoming heavy drinkers. At the same time, alcohol policy measures reduce consumption and harms in all consumer groups with an elevated level of risk (Mäkelä, 2018a).

## Identifying risky drinkers and supporting reduced drinking

In addition to self-reported harm measures, the prevalence of risky drinking is a key indicator for assessing the risks of (future) harm, both among individuals and in population sub-groups, and hence also for assessing the need for individual-level prevention efforts. Based on the results of the FDHS, a considerable part of the population is exposed to various aspects of risky drinking and risks of alcohol-related harm. At least 13% of the population was exposed to a moderate or high risk of chronic health problems because of the volume of their drinking ( $\geq 7$  units, 12 grams each, per week for women or  $\geq 14$  units for men), equivalent to more than 560,000 Finns. Being exposed to acute risks of harm due to heavy episodic drinking was even more common: 57% of the population had drunk at least five standard drinks of alcohol per occasion at least once in the previous year. A total of 78% of all alcohol drunk was drunk during risky drinking, either because it was drunk by persons whose volume of

consumption exceeded low-risk levels, or because it was consumed on heavy drinking occasions (Lintonen & Mäkelä, 2018). “Risk-free” alcohol consumption thus accounted for just over a fifth of all alcohol consumed in Finland.

The high level of risky drinking in Finland indicates that there is a need for individual-level measures to reduce the harmful use of alcohol. Screening, the early identification of risky drinking and brief interventions in healthcare settings are effective ways to reduce alcohol consumption and the related harm (Aalto, 2009; O’Donnell et al., 2014). However, according to the FDHS, heavy drinkers are surprisingly often not aware of the risks involved in their drinking. They do not identify themselves as risky or problem drinkers, and they do not typically experience their drinking as harmful: of those who engaged in heavy episodic drinking, 81% considered themselves to be moderate drinkers and so did 58% of longer-term heavy drinkers. Moreover, longer-term heavy drinkers do not consider their drinking harmful, even when they acknowledge the risks of the corresponding alcohol use at a general level (Warpenius, Markkula, & Mäkelä, 2018).

As long as this is the case, risky drinkers are also unlikely to be motivated to reduce their drinking. Especially in cases when the person is unaware of the risks of his or her drinking, the reduction of alcohol use may require screening and a brief intervention by social and health services, possibly including a motivational interview. A motivational interview is a particularly valuable method to support the self-regulation of alcohol use among those who do not recognise the risks of drinking (Aalto et al., 2015). Sometimes, it may also be harder for risky drinkers to limit the amount of alcohol drunk per occasion than to completely abstain from alcohol (Warpenius, Mäkelä, et al., 2018). When this is the case, quitting drinking – at least for a limited period – may be a good goal.

Altogether, there is still room for improvement in the implementation of screening and brief intervention procedures in Finland.

According to the FDHS, 89,000 Finns (2.6%) had been advised to cut down their drinking in healthcare services in the preceding year (Härkönen et al., 2018), which likely includes many pregnant women and people suffering from diseases. In any case, considering how common heavy drinking and experiencing various alcohol-related harms are, it seems that the need for the identification of and support for problematic drinking is greater than this. Many countries, Finland included, have issued low-risk drinking guidelines. The Finnish recommendations apply to healthy working-age men and women and involve not exceeding one unit a day for women or two for men. By following these recommendations, the risk of long-term adverse health consequences should remain at a low level (Suomalainen Lääkäriseura Duodecim ja Päihdelääketieteen yhdistyksen asettama työryhmä, 2015; Terveyden ja hyvinvoinnin laitos, 2016).

## **Connections between heavy drinking and the use of other substances**

One major finding from the point of view of preventing substance-abuse-related harm is that there is a connection between heavy drinking and the use of other substances, as well as other risky behaviours. According to the FDHS results, risky drinking, smoking, gambling and the use of other substances form “a web of harmful behaviours”. Heavy drinking seems to be in the middle of this web as its connection to the other risky behaviours, particularly smoking, is the strongest and increases their likelihood (Lintonen et al., 2018). Also, the simultaneous use of several different substances is most common among heavy drinkers regardless of age and gender. The two most common combinations of the simultaneous use of substances in Finland are alcohol and cannabis, and alcohol and medicinal drugs (Hakkarainen et al., 2018).

In light of these results, it is justified to develop approaches that combine the prevention of different addictive substances and behaviours in prevention work, such as the simultaneous screening of alcohol use and smoking in healthcare or social work, or support for reducing alcohol consumption and quitting smoking at the same time. Because alcohol is still the main substance of abuse in Finland and risky drinking is strongly linked to other harmful habits, the prevention of risky drinking can potentially also prevent harm from those other harmful habits (Lintonen et al., 2018).

### **Heavy episodic drinking and risky situations**

In addition to long-term heavy drinkers, alcohol-related harm was especially reported by the respondents who engaged in heavy episodic drinking (Härkönen et al., 2018; Mäkelä, 2018a). For example, the most common social disadvantage associated with drunkenness was the feeling of guilt over something that was said or done while under the influence of alcohol, which was reported to have happened during the 12 months preceding to the survey by almost one million Finns (26%) (Härkönen et al., 2018).

In Finland, the strong concentration of alcohol use on weekends, especially the evening and night hours of the weekend (Mäkelä, 2018b), is a special challenge for the prevention of acute alcohol-related harms in both private home surroundings and licensed premises and other public places. According to the FSDS, in Finland heavy drinking occasions make up a greater proportion of all drinking occasions taking place in licensed premises than of those taking place in homes. This is partly due to the fact that drinking in licensed premises occurs more often at night, and night-time drinking is often heavy drinking in any surroundings (Mäkelä & Warpenius, 2020; Warpenius & Mäkelä, 2018). Thus, intoxication-related risks are accentuated in heavy drinking situations in licensed premises. The environmental prevention of alcohol-related harm in bars and night

clubs requires the license holders to comply with responsible service practices, especially the refusal of sales to intoxicated patrons that is also stipulated by law, effective law enforcement and situational risk management in order to ensure public order and safety in the venues.

Alcoholic beverage preferences are also related to the phenomenon of heavy episodic drinking: a higher proportion of spirits and strong beer is consumed in heavy drinking occasions compared to other beverages (Lintonen & Mäkelä, 2018). Probably, the connection is at least partly due to people choosing to drink stronger beverages when they wish to get drunk. Nevertheless, reducing the availability or raising the prices of stronger beverages would not automatically reduce intoxication because one can also get drunk by drinking milder beverages if drunkenness is the aim. Experience has shown that an alcohol policy promoting milder alcoholic beverages can result in more alcohol consumption and an increased rate of harms (Tigerstedt, Karlsson & Härkönen, 2018). For this type of policy – favouring milder beverages in order to reduce harms – the amount of alcohol consumed in total should be genuinely reduced.

All in all, in the Finnish context, increased attention should be paid to heavy episodic drinking and the prevention of intoxication-related harm. The successful prevention of intoxication-related harm would also effectively reduce the overall economic burden that results from alcohol use. To prevent intoxication-related harm, Finnish drinking guidelines recommend that one should avoid drinking more than five to six standard drinks of alcohol per occasion (Terveyden ja hyvinvoinnin laitos, 2016).

### **The prevention of alcohol-related harm in different population groups**

The results of the FDHS identify some specific challenges for the prevention of alcohol-related harm in different population subgroups. The “domestication of alcohol use” (Tigerstedt & Härkönen, 2016), that is, the strongly grown

proportion of all alcohol consumed in home surroundings, poses a particular risk to the health and well-being of *children and young people* (Warpenius & Mäkelä, 2018). In addition to direct harm, excessive alcohol consumption by parents is associated with alcohol consumption by their children when they grow up, as well as with risks of alcohol-related harm and health problems in later life (Raitasalo, 2018). In order to prevent the intergenerational impacts of alcohol use and to promote equal opportunities, support for families with children is the key. Even when alcohol consumption by parents is not particularly problematic, culturally accepted “ordinary heavy episodic drinking” may be confusing for the child and a poor example in terms of social modelling for the child (Pitkänen et al., 2008).

Alcohol consumption by *minors* has decreased in Finland in recent decades. The causes of the decreasing trend include the improved control of age limits for alcoholic beverages as well as stricter parenting practices (Raitasalo et al., 2018). Despite this very positive development, the current situation cannot be considered satisfactory; according to the European School Survey Project on Alcohol and other Drugs (ESPAD), 22% of Finnish ninth grade students had still engaged in heavy episodic drinking in the previous 30 days (Raitasalo & Härkönen, 2019). Therefore, efforts to reduce the alcohol consumption of minors should be continued and intensified by local actions limiting the commercial and social availability of alcoholic beverages for minors (e.g., by the Local Alcohol, Tobacco and Gambling Policy [Paikallinen alkoholi-, tupakka- ja rahapelipolitiikka: PAKKA] model developed in Finland) (Fors et al., 2013).

The youngest respondents of the FDHS (aged 15 to 29 years) are not a coherent group but still stand out compared to other alcohol users: *young people* party more frequently at night (Warpenius & Mäkelä, 2018), drink less frequently but larger amounts of alcohol per occasion and experience more acute harms and more harms from other people’s drinking in

public spaces (Härkönen et al., 2018; Tigerstedt, Mäkelä, & Warpenius, 2018). Therefore, in order to reduce alcohol-related harm among the young, special attention should be paid to the reduction of heavy episodic drinking. But it is worth noting that some of the young people are already equipped with good skills for the self-regulation of heavy episodic drinking: they aim to control the amount of alcohol they drink by alternating between alcoholic and non-alcoholic beverages and by counting the number of the drinks they consume (Warpenius, Mäkelä, et al., 2018).

The large group of *working-age people* consume most of the alcohol drunk in Finland, and the burden of serious alcohol-related harm is greater among the middle-aged compared to the young and the retired population (GBD 2016 Alcohol Collaborators, 2018). People suffering from severe alcohol problems – let alone those who expose themselves to risks of harm without yet experiencing harms – do not necessarily carry any externally visible signs that would allow them to be distinguished from other people. Even those who died from alcohol-induced causes in middle age were employed to nearly the same extent as the general population a good 15 years before their death (Mäkelä, 2018a). These alcohol-related deaths, as well as many less serious harms, would in principle be preventable if the hazardous use of alcohol was more effectively identified in the social and healthcare sector and if the self-regulation of alcohol use could be efficiently supported among heavy drinkers. It is worth investing in routine screening, the early identification of problematic alcohol use and brief intervention among the working-aged people in social and health services.

Alcohol consumption, especially by women of *retirement age*, has increased significantly during one generation. Despite this, men in the same age range continue to consume a lot more alcohol (Tigerstedt, Mäkelä, Vilkkio, & Penttala-Nikulainen, 2018). The drinking habits of people aged 65–69 years closely resemble those observed among the middle-aged, and this is

an age group one should pay more attention to in order to prevent increasing alcohol problems in the ageing population. In the population of retirement age, the risks of alcohol use turn into actual harms at a lower level of consumption than among the middle-aged, and in the older population, interactions between medications and alcohol can also increase the risk of harms (Terveyden ja hyvinvoinnin laitos, 2016). One could sum up by saying that whereas young people are learning how to drink in a controlled way, older people should learn how to substantially reduce their drinking.

*Gender differences* are still prominent in Finnish drinking habits. Although men's and women's drinking habits have converged to some extent over the decades, men still drink much more alcohol than women (Mäkelä, 2018c) and they experience more alcohol-related harm from their own drinking than women do (Härkönen et al., 2018). In addition, women are more careful when it comes to questions on drinking: they are more aware of the risks associated with alcohol use (Warpenius, Markkula, & Mäkelä, 2018), they more often regulate their drinking by means of situation-specific tactics (Warpenius, Mäkelä, et al., 2018) and they also more often intervene in the excessive drinking of people close to them (Härkönen, Warpenius, & Mäkelä, 2018). Therefore, based on the FDHS results, preventive work should pay particular attention to the hazardous drinking of men, who often seem to be underequipped for the effective self-regulation of drinking. But then again, women are physiologically more susceptible to the adverse effects of alcohol, which is why Finnish guidelines for low-risk drinking are lower for women.

The gender differences and the greater harm caused by men's higher levels of drinking are additionally obvious from the point of view of alcohol's harm to others. Women more often reported that people close to them have problems with alcohol. Women also more often reported that they themselves suffered adverse consequences, including serious ones, from the

drinking of significant others. Underlying this gender difference is mainly the above-mentioned fact that men consume more alcohol than women, and, compared to men, women's significant others are much more often men. Women also reported more harm from other people's drinking in public spaces. For example, 70% of women aged 15 to 29 years had been afraid of intoxicated people in the previous year, and 44% of women of that age group had been harassed by intoxicated people in a public place (Tigerstedt, Mäkelä, & Warpenius, 2018).

The prevention of alcohol-related harm can also promote social equality between *socio-economic groups*. This is because the serious adverse effects of alcohol use are most common among those with a lower social status (Mäkelä, 2018d). However, the relationship between socio-economic position, alcohol consumption and the deficits in health and well-being is complex. People with a good social position drink alcohol more often than those who are less well off, but serious alcohol-induced harm and heavy episodic drinking are more common among the more disadvantaged population subgroups. Moreover, various studies suggest that similar drinking habits may increase the risk of harm more among those in lower socio-economic groups (Bellis et al., 2016; Mäkelä, 2018d; Mäkelä & Paljärvi, 2008).

Problem drinking is also a major factor explaining why people become excluded from working life. The accumulation of other behavioural risk factors associated with alcohol use (Hakkarainen et al., 2018; Lintonen et al., 2018) adds to the risk of marginalisation and exacerbates social inequalities. In the interests of equality, alcohol-related problems should be reduced by applying a wide range of policies, using tools from the alcohol policy tool kit, those from substance abuse prevention work and those addressing the more general problems of well-being, such as improving living conditions or improving the chances for substance-abusing youth to find paths leading to working life.

## **The relationship between risk perceptions, drinking motives and alcohol consumption**

The kinds of perceptions people have about health risks related to alcohol use are important for preventing and reducing harms from drinking. On the basis of the FDHS, the connection of alcohol to cancer, sleep disorders and depression was not extensively known to Finns. There is also work to be done in informing people about the levels of drinking that can be considered low-risk drinking as people's understanding of the risks attached to their drinking seemed to be biased. The situation is similar with other perceptions of risks: the heavier the drinking, the lesser the risks from drinking are considered to be (Warpenius, Markkula, & Mäkelä, 2018). There are also other biases attached to considering risks from drinking. For example, when discussing the negative aspects of alcohol use in a focus group interview, young adults did not once point to long-term health harms and rarely pointed to immediate health threats. The focus of the young people's thinking was on both the good and bad social consequences of drinking (Maunu, 2012).

From an individual's point of view, these biases are understandable; accidents and other unexpected acute harms resulting from drinking are an exception, as most drinking occasions are problem-free (or at least considered as such). At the population level, however, these cases, which are rare from an individual's point of view, accumulate to be the numerous alcohol-related problems at the population level which, for example, emergency clinics and insurance companies wrestle with. Different kinds of education and information efforts should pay more attention to alcohol use as a risk factor for public health problems, as well as to informing the public about the low-risk guidelines for drinking.

When seeking solutions to alcohol-related problems, many people think that one has to find out the root causes of drinking and then solve them. However, figuring out heavy

drinkers' motives for drinking will not necessarily be helpful in finding preventive solutions at the population level. According to the FDHS results, the more people drink, the more numerous are the reasons that they give to justify their drinking. That is, the heaviest drinkers always seem to find a good reason for their drinking, whether it be feeling great or feeling down, being in company or being alone, or numerous other reasons. The analysis of the motives of drinking did show, however, that heavy drinkers' motives are more often associated with the management of negative emotions, such as stress relief or mitigating depression, than among other drinkers (Härkönen & Katainen, 2018). It has also been observed in treatment settings that alcohol use is often defended for reasons related to mental health, such as anxiety and depression – alcohol is used as a form of self-medication to alleviate these symptoms (Aalto et al., 2015). However, alcohol is poor medication for this purpose because, when used repeatedly, it only exacerbates those symptoms.

## **Cultural attitudes, norms and self-regulation**

The vast majority of Finns drink alcohol, and drinking alcoholic beverages is nearly an unquestioned norm in many social situations. In a society where opportunities for drinking alcohol are all around us, the self-regulation of alcohol consumption can be considered as an essential component of everyone's life-management repertoire. When looking at how Finns try to regulate their alcohol consumption, the key finding was that even moderate and light drinkers are limiting the amount of alcohol consumed per occasion by various means, even when the same people do not think that they are intentionally or specifically trying to control their drinking (Warpenius, Mäkelä, et al., 2018). The almost automatic use of various self-control techniques is likely to be a part of a currently prevailing ethos in which moderate drinking is seen as a part of everyday life (cf. Härkönen & Karlsson, 2018).



Whereas the moderate use of alcohol is widely accepted today, abstinence is often viewed as almost an anomaly and a lifestyle choice that the abstinent people should explain and justify. When the abstinent respondents were asked about the reasons for their sobriety, they emphasised the benefits of abstinence also as a health-enhancing lifestyle choice (Katainen & Härkönen, 2018). Preventive efforts could thus encourage a cultural attitude which allows for and accepts both occasional and permanent abstinence in different social (drinking) situations (Mäkelä & Maunu, 2016).

People's attitudes and perceptions about alcohol inform us about how people posit themselves towards alcohol and how acceptable or condemnable they consider different types of alcohol consumption to be in various circumstances and social situations. Opinions and attitudes about alcohol steer social action, yet they do not always go hand in hand with actual drinking behaviour. For example, drinking in the presence of children is not considered desirable, but many do so (Raitasalo, 2018); heavy drinkers are aware of the risks of drinking at a general level but still drink a lot (Warpenius, Markkula, & Mäkelä, 2018). Overall, the more alcohol the respondents drank, or the more they drank in an episodic, heavy manner, the more permissible their attitudes and opinions about alcohol use and alcohol policies were (Härkönen & Karlsson, 2018; Österberg et al., 2017). It is difficult to say whether alcohol use affects attitudes and opinions or vice versa, but most likely, the effect is circular and filled with the attribution biases described in this reflection piece.

### **Conclusions: Individual-level risk management or a restrictive alcohol policy?**

There seem to be everlasting differences in the opinions regarding to whom the responsibility for the control of drinking and prevention of alcohol-related harm belongs: to individuals,

communities or societies/states. The results of the FDHS also shed light on this matter. Drinking patterns are not only linked to attitudes and risk perceptions but also to what people consider to be appropriate means to reduce alcohol use and the related harms in terms of alcohol policy, informal social control and people's life management.

According to the FDHS results, prevention which is solely based on individuals' awareness of the risks attached to drinking will most likely not be effective due to the biases involved and because of the way in which attitudes towards drinking are associated with drinking behaviour. Universal alcohol policy measures, such as regulating the availability and prices of alcoholic beverages, do not require individual risk awareness or active decision-making; instead, those measures reduce consumption and harms at the population level through market mechanisms.

Thus, the results of the FDHS can be used to gain a better understanding of the ways to prevent alcohol-related harm at the population level and to understand how and why restrictive policy measures may serve this purpose. Harms do not only arise among the heaviest drinkers, and efficient methods to prevent harm may be found among those preventive efforts that apply to populations rather than only to the heaviest drinkers. One key to the effectiveness of alcohol policy measures is that they do not depend on people's attitudes to alcohol consumption at the individual level.

The results of the FDHS (or other surveys) also help in identifying the population subgroups and situations with an elevated risk of alcohol-related harm and in characterising the drinking patterns and social situations in which drinking takes place in these vulnerable parts of the population; the results describe connections between drinking habits, attitudes and harms and explore how people perceive alcohol-related risks and how they regulate their alcohol consumption.

However, it is well known that information campaigns and education aimed at changing people's attitudes or awareness are not in

themselves effective means of reducing alcohol consumption and harm (Babor et al., 2010). Based on the results of the FDHS, it seems that people adjust and select their alcohol-related attitudes and opinions based on how they use alcohol and how they experience their drinking. Therefore, educational messages may fall on deaf ears among those individuals who would benefit most from reducing their drinking. But then, if the information on harms and risk levels is combined with other measures so that they could open the way to a culture that is better at sticking to moderation, heavy and risky drinkers may change their drinking to bring it in line with the majority (Mäkelä, 2018a).

Finland has a long history of a strict alcohol control policy that supports public health goals, but some liberal reformations have been carried out quite recently. This development may predict a step-by-step erosion of national-level alcohol policy and the regulation of markets (Karlsson et al., 2020). On the whole, it is necessary that the alcohol policy measures that are used are accepted by the population. Finnish attitudes towards alcohol policy have fluctuated very strongly over the decades (Härkönen & Karlsson, 2018). At present, the population's alcohol policy opinions are strongly divided so that changes either in a liberal or restrictive direction can be decisive in the future alcohol policy debate and in decision-making. If the key national alcohol policy regulations were to be abolished in the interests of market and consumer freedom, the prevention of alcohol-related harm would increasingly fall to consumers themselves and also to local-level prevention workers, self-regulation by markets and informal social control.

### Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

### ORCID iD

Pia Mäkelä  <https://orcid.org/0000-0002-3343-2139>

### References

- Aalto, M. (2009). Alkoholin suurkulutuksen varhainen tunnistaminen ja hoito [Early recognition and therapy of heavy use of alcohol]. *Duodecim*, 125(8), 891–896.
- Aalto, M., Alho, H., Kiianmaa, K., & Lindroos, L. (Eds.). (2015). *Alkoholiriippuvuus [Alcohol dependence]*. Kustannus Oy Duodecim.
- Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., Grube, J., Hill, L., Holder, H., Homel, R., Livingston, M., Österberg, E., Rehm, J., Room, R., & Rossow, I. (2010). *Alcohol: No ordinary commodity. Research and public policy*. Oxford University Press.
- Bellis, M. A., Hughes, K., Nicholls, J., Sheron, N., Gilmore, I., & Jones, L. (2016). The alcohol harm paradox: Using a national survey to explore how alcohol may disproportionately impact health in deprived individuals. *BMC Public Health*, 16(1), 111.
- Fors, R., Heimala, H., Holmila, M., Ilvonen, S., Kesänen, M., Markkula, J., Saunio, A-L., Strand, T., Tamminen, I., Tenkanen, T., Warpenius, K. (2013). *Paikallinen alkoholi-, tupakka- ja rahapelihaittojen ehkäisy – Käsikirja yhdessä toteutettavaan Pakka-toimintamalliin [Local alcohol, tobacco and gambling policy: A guide to implementation of the Pakka model]*. Kide 23. Terveysten ja hyvinvoinnin laitos.
- GBD 2016 Alcohol Collaborators. (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.
- Giesbrecht, N., & Bosma, L. M. (Eds.). (2017). *Preventing alcohol-related problems: Evidence and community-based initiatives*. American Public Health Association.
- Hakkarainen, P., Karjalainen, K., & Tigerstedt, C. (2018). Missä määrin ja kuinka usein alkoholia, huumeita ja lääkkeitä käytetään yhdessä? [How prevalent and frequent is the combined use of alcohol, illicit drugs and prescription drugs?]. In

- P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 89–97). Terveyden ja hyvinvoinnin laitos.
- Härkönen, J., & Karlsson, T. (2018). Miten suhtautuminen alkoholiin on muuttunut? [How have attitudes towards alcohol changed?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 193–204). Terveyden ja hyvinvoinnin laitos.
- Härkönen, J., & Katainen, A. (2018). Mitä syitä suomalaiset esittävät alkoholinkäytölleen? [What motivations Finns have for their drinking?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 205–213). Terveyden ja hyvinvoinnin laitos.
- Härkönen, J., Warpenius, K., & Mäkelä, P. (2018). Miten paljon alkoholinkäyttäjät ovat kokeneet haittoja omasta juomisestaan? [How much have Finns experienced harm from their own drinking?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 49–57). Terveyden ja hyvinvoinnin laitos.
- Karlsson, T., Mäkelä, P., Tigerstedt, C., & Keskimäki, I. (2020). The road to the Alcohol Act 2018 in Finland: A conflict between public health objectives and neoliberal goals. *Health Policy*, 124(1), 1–6.
- Katainen, A., & Härkönen, J. (2018). Miten suomalaiset perustelevat raittiuttaan? [What reasons do Finns give for their abstinence?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 214–224). Terveyden ja hyvinvoinnin laitos.
- Lintonen, T., & Mäkelä, P. (2018). Kuinka suuri osa juomisesta on alkoholin riskikäyttöä? [What proportion of alcohol use does risky drinking account for?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 39–48). Terveyden ja hyvinvoinnin laitos.
- Lintonen, T., Nevalainen, J., & Latvala, T. (2018). Miten alkoholin riskikäyttö, muiden päihteiden ja tupakkatuotteiden käyttö sekä rahapelaaminen liittyvät toisiinsa? [How are risky drinking, smoking, use of other substances and gambling connected?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 78–88). Terveyden ja hyvinvoinnin laitos.
- Mäkelä, P. (2018a). Miksi väestön kokonaiskulutuksella on merkitystä? [Why does the total consumption of a population matter?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 67–77). Terveyden ja hyvinvoinnin laitos.
- Mäkelä, P. (2018b). Milloin suomalaiset juovat? [When do Finns drink?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 134–143). Terveyden ja hyvinvoinnin laitos.
- Mäkelä, P. (2018c). Miten käyttötavat ovat muuttuneet? [How have drinking patterns changed?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 26–38). Terveyden ja hyvinvoinnin laitos.
- Mäkelä, P. (2018d). Miten työikäisten yhteiskunnallinen asema on yhteydessä alkoholinkäyttöön? [How is socio-economic position related to alcohol consumption?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 168–177). Terveyden ja hyvinvoinnin laitos.
- Mäkelä, P., Härkönen, J., Lintonen, T., Tigerstedt, C., & Warpenius, K. (Eds.). (2018). *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat*

- [*This is how Finns drink*]. Terveiden ja hyvinvoinnin laitos.
- Mäkelä, P., & Maunu, A. (2016). Come on, have a drink: The prevalence and cultural logic of social pressure to drink more. *Drugs: Education, Prevention and Policy*, 23(4), 312–321.
- Mäkelä, P., & Paljärvi, T. (2008). Do consequences of a given pattern of drinking vary by socioeconomic status? A mortality and hospitalisation follow-up for alcohol-related causes of the Finnish Drinking Habits Surveys. *Journal of Epidemiology & Community Health*, 62, 728–733.
- Mäkelä, P., & Warpenius, K. (2020). Night-time is the right time? Late-night drinking and assaults in Finnish public and private settings. *Drug and Alcohol Review*, 39(4), 321–329.
- Maunu, A. (2012). Ryyppäämällä ryhmäksi? Ehkäisevän päihdetyön karttalehtiä nuorten ja nuorten aikuisten juomiskulttuureihin [Social drinking in small-groups: The road map of substance abuse prevention among youth and young adults]. EHYT.
- O'Donnell, A., Anderson, P., Newbury-Birch, D., Schulte, B., Schmidt, C., Reimer, J., & Karner, E. (2014). The impact of brief alcohol interventions in primary healthcare: A systematic review of reviews. *Alcohol and Alcoholism*, 49(1), 66–78.
- Österberg, E., Raitasalo, K., Karlsson, T., & Mäkelä, P. (2017). *Alkoholipoliittiset mielipiteet 2016–2017* [Alcohol policy opinions 2016–2017]. THL Tilastoraportti 12/2017. Terveiden ja hyvinvoinnin laitos. <http://urn.fi/URN:NBN:fi-fe201705036297>
- Pitkänen, T., Kokko, K., Lyyra, A.-L., & Pulkkinen, L. (2008). A developmental approach to alcohol drinking behaviour in adulthood: A follow-up study from age 8 to age 42. *Addiction*, 103(1), 48–68.
- Raitasalo, K. (2018). Hyväksyvätkö suomalaiset alkoholinkäytön lasten läsnä ollessa? [Do Finns accept alcohol consumption when children are present?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisen muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 125–133). Terveiden ja hyvinvoinnin laitos.
- Raitasalo, K., & Härkönen, J. (2019). *Nuorten päihteiden käyttö ja rahapelaaminen – ESPAD tutkimus 2019* [Alcohol, drug use and gambling among adolescents – ESPAD survey 2019]. THL Tilastoraportti 40/2019.
- Raitasalo, K., Tigerstedt, C., & Simonen, J. (2018). Miksi nuoret juovat vähemmän? [Why do young people drink less than before?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisen muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 158–167). Terveiden ja hyvinvoinnin laitos.
- Suomalaisen Lääkäriseuran Duodecimin ja Päihdelääketieteen yhdistyksen asettama työryhmä [Working group appointed by the Finnish Medical Society Duodecim and the Finnish Society of Addiction Medicine]. (2015). *Alkoholiongelman hoito. Käypä hoito -suositus* [Treatment of alcohol abuse: Current care guidelines]. Suomalainen Lääkäriseura Duodecim. [www.kaypahoito.fi](http://www.kaypahoito.fi)
- Terveiden ja hyvinvoinnin laitos [Finnish Institute for Health and Welfare]. (2016). *Alkoholin terveydelle aiheuttamien riskien vähentäminen* [How to reduce alcohol-related health risks]. Tiedä ja toimi 1/2016. Terveiden ja hyvinvoinnin laitos.
- Tigerstedt, C., & Härkönen, J. (2016). Juomisen kotiutuminen [The domestication of alcohol use]. In M. Holmila, K. Raitasalo, & C. Tigerstedt (Eds.), *Sukupolvien sillat ja kasvamisen karikot – vanhemmat, lapset ja alkoholi* [Bridges between the generations and pitfalls in childrearing: Parents, children and alcohol] (pp. 118–128). Terveiden ja hyvinvoinnin laitos.
- Tigerstedt, C., Karlsson, T., & Härkönen, J. (2018). Suosivatko suomalaiset miedompia alkoholijuomia ja onko oluen ja viinin ruokajuominen yleistynyt? [Do Finns favour milder alcoholic beverages and has drinking beer and wine with meals become more prevalent?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisen muuttuvat alkoholinkäyttötavat* [This is how Finns drink] (pp. 101–111). Terveiden ja hyvinvoinnin laitos.

- Tigerstedt, C., Mäkelä, P., Karlsson, T., Härkönen, J., Lintonen, T., & Warpenius, K. (2020). Change and continuity in Finnish drinking in the 21st century. *Nordic Studies on Alcohol and Drugs*. doi: 10.1177/1455072520954324
- Tigerstedt, C., Mäkelä, P., Vilkkö, A., & Penttälä-Nikulainen, O. (2018). Miten eläkeikäiset juovat? [How do people drink in retirement age?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat [This is how Finns drink]* (pp. 178–189). Terveyden ja hyvinvoinnin laitos.
- Tigerstedt, C., Mäkelä, P., & Warpenius, K. (2018). Millaisia haittoja juomisesta koituu muille kuin juojalle itselleen? [What kinds of harm does drinking cause to other people than the drinker?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat [This is how Finns drink]* (pp. 58–66). Terveyden ja hyvinvoinnin laitos.
- Warpenius, K., & Mäkelä, P. (2018). Missä suomalaiset juovat? Alkoholinkäyttö koti- ja anniskelu ympäristössä [Where do Finns drink? Alcohol consumption in home surroundings and licensed premises]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisten muuttuvat alkoholinkäyttötavat [This is how Finns drink]* (pp. 112–124). Terveyden ja hyvinvoinnin laitos.
- Warpenius, K., Mäkelä, P., Raitasalo, K., & Castrén, S. (2018). Miten suomalaiset hallitsevat alkoholinkäyttöään? [How do Finns regulate their own alcohol consumption?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisien muuttuvat alkoholinkäyttötavat [This is how Finns drink]* (pp. 237–248). Terveyden ja hyvinvoinnin laitos.
- Warpenius, K., Markkula, J., & Mäkelä, P. (2018). Millaisia käsityksiä suomalaisilla on alkoholinkäytön terveysriskeistä? [How do Finns perceive alcohol-related health risks?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo – Suomalaisien muuttuvat alkoholinkäyttötavat [This is how Finns drink]* (pp. 225–236). Terveyden ja hyvinvoinnin laitos.