

What's new about adolescent drinking in the Nordic countries?

A report on Nordic studies of
adolescent drinking habits in
2000–2018



Nordic Welfare
Centre

**What's new about adolescent drinking in the Nordic countries?
A report on Nordic studies of adolescent drinking habits in 2000–2018**

Project name: Changing Drinking Habits among Young People and Seniors in the Nordic Region

Published by
Nordic Welfare Centre
© 2019

Project manager: Yaira Obstbaum

Author: Yaira Obstbaum

Responsible publisher: Eva Franzén

ISBN: 978-91-88213-39-6

Nordic Welfare Centre Sweden
Box 1073, SE-101 39 Stockholm
Visiting Address: Drottninggatan 30
Phone: +46 8 545 536 00
info@nordicwelfare.org

Nordic Welfare Centre
c/o Folkhälsan
FI-00250 Helsinki
Visiting Address: Topeliuksenkatu 20
Phone: +358 20 741 08 80
helsingfors@nordicwelfare.org

The report can be downloaded at nordicwelfare.org

Contents

1	Preface.....	5
2	Summary	7
3	Introduction	11
	3.1 What do we talk about when we talk about adolescent drinking?.....	11
	3.2 Why look at the Nordic states separately?	12
4	Adolescent drinking habits in the Nordic countries in 2000–2017	14
	4.1 Denmark	17
	4.2 Finland	19
	4.3 Iceland	21
	4.4 Norway	22
	4.5 Sweden	24
	4.6 Adolescent use of cannabis in the Nordics: A few notes.....	26
	4.7 Summary of chapter 4	27
5	Harms associated with adolescent alcohol use.....	29
	5.1 Drinking is delinquent as such.....	29
	5.2 Drinking is not healthy	30
	5.3 Drinking is connected to accidents, risky behaviour, delinquency, and victimisation.....	30
	5.4 Drinking style matters.....	31
	5.5 Declining alcohol use impacts alcohol-related harm	33
	5.5.1 Notes on the alcohol–violence connection.....	33
	5.6 Summary of chapter 5	34
6	Are all adolescent groups drinking less?.....	36
	6.1 Has drinking declined in all consumption groups?.....	36
	6.2 How about a social differentiation in drinking?	37
	6.3 Will future adult generations drink less?	38
	6.4 Summary of chapter 6.....	41
7	Possible reasons for the decline in adolescent drinking: Seven hypotheses from a Nordic perspective	42
	7.1 1. Better legal enforcement of age limits? The relevance of alcohol policy and its practical enactment.....	43
	7.1.1 Availability of alcohol.....	46
	7.1.2 Short summary	46
	7.2 2. Rise of new technology?	47
	7.2.1 Short summary	48
	7.3 3 Changing social norms?.....	48
	7.3.1 Short summary	49
	7.4 4. Happier and more conscientious children?	49

7.4.1	The question of mental health	50
7.4.2	Short summary	51
7.5	5. Better parenting (and a smaller generation gap)?	51
7.5.1	Warmer relationships?	52
7.5.2	Parental attitudes and example	53
7.5.3	Parents restricting drinking	56
7.5.4	Short summary	57
7.1	6. Demographic shifts?	57
7.1.1	Short summary	60
7.2	7. Lower affordability and less economic confidence?	60
7.2.1	Short summary	61
7.3	Other factors	62
7.3.1	Alcohol advertising and the media	62
7.3.2	Peers	63
7.3.3	Preventing adolescent drinking	65
7.3.3.1	The total consumption approach and adolescents	65
7.3.3.2	Preventive programmes	66
7.3.3.3	Icelandic prevention strategies for young people	68
7.3.4	Short summary	69
7.4	Summary of chapter 7	70
8	Implications for further research and policy	73
9	References	76
10	Appendices	100
11	Expert Team	102
11.1	Project Manager (Nordic Welfare Centre)	102

1 Preface

Systematic self-report studies on adolescent drinking have been available in most Nordic countries at least since the 1970s and in some cases even earlier. Changes in young people's drinking habits clearly interested both researchers and the general public.

In 2016 the Nordic Welfare Centre was given the opportunity to apply for funding in the field of public health for projects of current interest from a policy-making perspective. Adolescent drinking habits was a natural choice given that drinking among adolescents has declined in all Nordic countries. We should look at the available research evidence and map the changes and possible reasons, so that policy-makers could make this change persist. We should also highlight why it is important to pay attention to adolescent drinking in the first place: what is the connection between drinking and harm in adolescence and in adulthood?

The Nordic states offer a unique arena for exploring developments in alcohol-related issues. The five Nordic countries have relatively high levels of universal state provision in health, social care, and education, for example, making the countries egalitarian and social and economic differences relatively small. The Nordic states also share an alcohol policy which aims to reduce alcohol-related harm by restricting availability of alcohol through, among other things, opening hours, pricing, and enforcing age limits.

Looking at adolescents' drinking habits in the Nordic countries separately from those in other Western states may help to underline developments similar to both welfare states and other states. The declining trend in youth drinking has been observed in many Western countries, but it has been strongest in the Nordic countries and in Ireland. Studying the Nordic developments separately from other Western countries may suggest what is universal about drinking among young people and which mechanisms are at work regardless of state subsidies, social benefits, or drinking culture. We might also learn what kind of social harms may be limited by the welfare state or alcohol monopolies – and also which factors may change if Nordic alcohol policies are liberalised.

This report compiles information from the current Nordic literature about adolescent drinking in the five Nordic countries. We hope this report will be useful for policy makers, practitioners and researchers, and anyone with an interest in young people's drinking habits.

The Nordic Welfare Centre wishes to thank the Nordic Public Health arena for funding this important project. The project has included a Nordic expert group of researchers: We want to thank the researchers who have participated in the expert groups and in other meetings around the making of this report, and the many experts and researchers and colleagues who have provided information for the report.

We hope that the readers will find this report both interesting and inspiring.

Eva Franzén
Director, Nordic Welfare Centre

2 Summary

Adolescent drinking was on the increase all through the 1970s, the 1980s, and well into the 1990s. Researchers, decision-makers, and the public alike viewed the development as problematic and troubling. Then, sometime around the turn of the millennium, adolescent drinking in the Nordic countries started to decline. Drinking is now less common among underage young people in all Nordic countries compared to the situation some 10 or 15 years ago. Some differences between the Nordic countries nevertheless persist. This report is based on an overview of the most recent Nordic research literature on adolescent drinking.

The Nordic states offer a unique arena for exploring developments in alcohol-related issues. The Nordic countries have relatively high levels of universal state provision in health, social care, and education, among other things, making them egalitarian and social and economic differences relatively small. The Nordic states also share an alcohol policy which aims to reduce alcohol-related harm by restricting availability of alcohol through, for example, opening hours, pricing, and enforcing age limits. Looking at drinking habits among young people in the Nordic countries separately from those in other Western states may help to highlight developments of declining adolescent drinking that are similar and dissimilar in welfare states with restrictive alcohol policies and in other states. Declining trends in adolescent drinking have been observed in many Western countries, including the United States, Canada, Australia, and in most of Europe. A decline has taken place in countries with differing alcohol policies, differing economic situations, and with differing trends in adult drinking. Could it be that adolescent drinking is partly influenced by different factors than adult drinking?

The declining trend in drinking has been particularly strong in the Nordic countries. The share of adolescents who have never drunk alcohol has increased markedly in all Nordic countries. Those adolescents who do drink alcohol drink smaller amounts and the number of drinking occasions has declined as well. Also, adolescents are older when they take their first drink and are intoxicated for the first time. There has also been a decline in other norm-breaking behaviour such as youth delinquency and truancy.

Youth drinking is nowadays least prevalent in Iceland and Norway, followed by Sweden and Finland. Denmark serves as the 'Nordic exception'. It is the only Nordic country where adolescent drinking is above the European average. Still, adolescent drinking has also declined in Denmark, although less than in other Nordic countries. According to the ESPAD study (The European School Survey Project on Alcohol and Other Drugs), the share of adolescents in 2015 who had

ever in their life drunk alcohol was 92% in Denmark, 81% in the Faroe Islands, 74% in Finland, 65% in Sweden, 57% in Norway, and 35% in Iceland. The ESPAD average was 80%. The share of adolescents who had been *intoxicated during the last 30 days* was 32% in Denmark, 13% in Finland, 10% in the Faroe Islands, 9% in Sweden, 8% in Norway, and 3% in Iceland. The ESPAD averaged was 13%.

Figures from some Nordic countries suggest that the declining trend in adolescent drinking might be coming to a halt or evening out at this low level, but it is still too early to talk about a break in the declining trend.

But why should we be interested in how much adolescents drink? The main reason is that *adolescent drinking is connected to many types of harm*, such as negative somatic and mental health outcomes, risky behaviour (such as unwanted or unsafe sex), and also the risk for accidents, violence, and victimisation. Harm can occur as a direct consequence of drinking or more indirectly as a consequence of a lifestyle where drinking is one part (for example, as a heightened risk for alcohol problems in adulthood).

Many direct harms of alcohol use in adolescence such as delinquent/risky/violent behaviour and health problems may be avoided when young people consume less alcohol. The overall consumption level of alcohol among adolescents has been shown to be connected to the level of self-reported alcohol-related problems. Also, the drinking style of the adolescents matters. Intoxication-oriented drinking and binge-drinking particularly may lead to unwanted outcomes both in adolescence and later in life. Early initiation of drinking, and early initiation of heavy drinking in particular, have a strong connection to problems in adulthood. Still, not all adolescents that drink hard continue to do so in adulthood, and not all adults who drink too much have done so in their youth. Preventive efforts should thus target entire populations of young people and not just those who drink heavily.

In most Nordic countries, a reduction in drinking has been observed among all kinds of drinkers, from light to heavy consumers. Research indicates that both those who drink a lot and those who drink less have started to drink less. Some groups, however, have not followed the trend: drinking has increased in certain socioeconomically deprived groups. There should be more research on these developments and a potential polarisation of drinking.

It is unclear whether this generation of adolescents that drinks less than previous generations will continue to do so when they reach adulthood. A few Finnish studies indicate that once they reach the legal age for drinking, young adults tend to drink similarly from one cohort to another. At the same time, there are

signs that drinking might also be on the decline among young adults. More longitudinal studies following adolescents to adulthood are needed to study this question further.

Why have adolescents started to drink less, then? Many questions remain regarding the *reasons* for the decline in adolescent drinking over time. The main conclusion is that *for the most part researchers are still looking for answers*.

Nordic studies have found statistical support for the role of certain decisive factors behind the decline. For example, *parents know where their adolescents spend their free time* and have greater control of it. Secondly, *adolescents find it harder to get hold of alcohol*. Parents seem to employ stricter rules about alcohol use among teenagers than before. These factors stress the importance of known mechanisms of influencing adolescent drinking: limiting the availability of alcohol, and the role of parents.

The relationship between parents and their children indeed seems to have undergone changes that may have contributed to the decline in drinking, but more studies are needed to examine in what ways this impacts adolescent drinking. It seems to matter that parents have become more restrictive regarding adolescent alcohol use. Parents of relatively heavy drinking adolescents as well as moderately drinking or abstaining adolescents all seem to have become more restrictive than previously.

Youth culture itself seems to have changed, too, possibly deflating the role of alcohol. However, what these changes are and how they might affect drinking is still under research. Also, this is where the Nordic countries appear to differ from one another: in Denmark drinking still seems to play an important role in youth culture, and remains relatively common despite the decline.

Adolescents today spend much time in front of digital screens. However, to date, there is little or no support for the idea that this leads to less 'hanging out' in the streets and thus to less drinking. However, the area needs more research. It seems important to specify what type of device is used (computer, smartphone, etc.) and what the digital equipment is used for (games or different social media applications, etc.). Social media can indeed also be used to get access to alcohol. Factors such as mental health, social capital, and loneliness should be considered in this research.

Current Nordic research does not corroborate the claim that declining alcohol use would substitute alcohol with cannabis. Most young people who use canna-

bis also use alcohol, and the substances are usually used at the same time. Cannabis use has not increased among underage young people (although a recent Norwegian study suggests otherwise). However, attitudes toward cannabis use have become more lenient, and adolescents today do not perceive cannabis to be as risky as adolescents did for example 10 years ago. Also, cannabis use among *young adults* has increased in many Nordic countries.

Studies that try to answer why young people drink less today than young people did 10 or 15 years ago should further look at the following questions: adolescents' living conditions and habits, use of time, leisure activities, family backgrounds and conditions, interaction with parents and peers, and alcohol use patterns. Official alcohol policy and economic factors are likely to influence the development as well as are (social) media and advertising.

Drinking cultures change slowly and in a collective manner. It is a question of many factors whether these generations of adolescents who have been more sober than previous ones will continue to drink less also in adulthood and whether future cohorts of adolescents will keep drinking less. The way that generations of young people experience both adolescence and adulthood indeed plays a part in how their drinking habits will turn out – and the economic, social, and especially alcohol political factors should not be forgotten, either. The changing role of parents and the way in which they control and influence their children's drinking deserves to be rehearsed many times over.

Adolescents who grow up today seem to value school and education. They want to perform well, and drink and smoke less. However, they also experience more stress, anxiety, and disrupted sleep. The apparently deteriorating mental health of adolescents, coinciding with declining alcohol use, has puzzled scholars. It clearly needs to be addressed in future studies. Some studies point at certain mental health symptoms in adolescence heightening the risk for alcohol problems in adulthood.

3 Introduction

Adolescent drinking seemed to be on the increase throughout the 1970s, the 1980s, and well into the 1990s. Researchers, decision-makers, and the public all viewed the development as problematic and troubling. Then, sometime around the turn of the millennium, adolescent drinking in the Nordic countries started to decline. Drinking is now less common among underage young people in all Nordic countries compared to the situation some 10 or 15 years ago. Some differences between the Nordic countries nevertheless persist.

What does this development mean for those, for example, who work with young people or who make decisions that impact their lives? What kind of questions are important to consider about young people's drinking today? This report presents recent developments in Nordic adolescent drinking that are important for practitioners, civil servants, politicians, and researchers alike. The report has been written with this broad audience in mind. The chapters provide an overall introduction into the main themes, and are complemented by footnotes. Those wanting to grasp a quick overview are advised to start with the main summary and the short summaries at the end of each chapter.

The report is based on an overview of the most recent Nordic research literature on adolescent drinking. An expert group of Nordic researchers on adolescent drinking have been consulted in the writing of this report. (see chapter 11)

The report discusses the drinking habits of underage young people – adolescents – after the turn of the millennium. It shows how these habits have changed in the Nordic countries and points out similarities and differences between them. The report shows which groups and age groups drink less, recognises certain problem groups, and asks whether the changes are likely to have effects also when the young people are adults. Drawing on the available research, the report suggests possible reasons for the changes and identifies areas of further research.

3.1 What do we talk about when we talk about adolescent drinking?

This report is based on a literature search of Nordic research on adolescent drinking. The search was carried out by Pia Pörtfors, Information Specialist at

the Finnish Institute for Health and Welfare (THL), and consisted of peer-reviewed research articles, book chapters, and dissertations, some of which were later omitted. We also used research reports to determine changes in the prevalence of alcohol and drug use in the Nordic countries. The literature search covered the years 2000–2016. Some newer and older publications were later added by project managers at the Nordic Welfare Centre.

The literature has been reviewed in light of the themes that are interesting from a practical and policy-making perspective. The search used key words according to certain themes and is presented thematically in the report. Some central international studies have also been cited.

The tables presented in the study mainly come from survey data on adolescent drinking. There are several good statistical sources for information on drinking among underage young people. In this publication, the figures mainly stem from the European School Survey Project on Alcohol and Other Drugs (ESPAD), which produces comparable data on substance use over time among 15–16-year-old students. At times we have also referred, for example, to Nordic national studies concerning the health of school-age children.

While the report focuses on the question of drinking among adolescents, it also touches on the relationship of alcohol to the use of other drugs, mainly cannabis.

3.2 Why look at the Nordic states separately?

Youth drinking has declined in most Western countries, but there are still insights to be had from looking at youth drinking in a distinctly Nordic context. The Nordic states share an alcohol policy which aims to reduce alcohol-related harm by restricting availability of alcohol through opening hours, pricing, age limits, etc. All Nordic countries with the exceptions of Denmark and Greenland regulate alcohol sales of wines and spirits through state alcohol monopolies (Alko in Finland, Systembolaget in Sweden, Vinmonopolet in Norway, Vínbúð in Iceland, and Rúsdrékkasøla Landsins in the Faroe Islands¹).

The Nordic countries are welfare states characterised by relatively high levels of universal state provision of health care and social services, including education that is free of charge for its citizens. This makes the Nordic countries egalitarian, with relatively small social and economic differences.

¹ The monopoly store in the Faroe Islands was founded in 1992.

The Nordic states offer a unique arena for looking at how alcohol-related issues develop when the social policies are not too dissimilar – whether there is an alcohol monopoly or not.

The amount of alcohol drunk per capita is known to connect to the level of alcohol-related harm. The relationship between alcohol use and harm, however, also varies according to drinking patterns² in different drinking cultures. For example, the level of violence is different depending on different patterns of drinking. Some studies indicate a causal relationship between alcohol consumption and violence; drinking to intoxication plays an especially important role in violent offences. The strength of this relationship is, however, culturally dependent, and the amount of alcohol that is drunk and patterns of drinking are not the only factors behind rates of violence (Österberg & Karlsson, 2011).

Looking at drinking habits among young people in the Nordic countries separately from other Western states may help to highlight developments that are similar in both welfare states and other states. The declining trend in youth drinking has been observed in many Western countries, but has been strongest in the Nordic countries and in Ireland (see more in chapter 4). Studying the Nordic developments separately from other Western countries may suggest what is universal about drinking among young people and which mechanisms are at work regardless of state subsidies, social benefits, or drinking culture. We might also learn, for example, what kind of social harms may be limited by the welfare state or by alcohol monopolies – and also which factors may change, if Nordic alcohol policies are liberalised (cf. Room et al., 2002).

² Drinking patterns refer to the temporal and cultural ways of drinking alcohol. For example, drinking one glass of wine at home every evening as opposed to seven glasses of wine in a restaurant on a Friday night represent different drinking patterns.

4 Adolescent drinking habits in the Nordic countries in 2000–2017

Adolescent drinking seemed to constantly be on the increase during the 1970s, 1980s, and well into the 1990s. Researchers, decision-makers, and the public all viewed the development as problematic and troubling (Raitasalo, Tigerstedt, & Simonen 2018). Then, around the turn of the millennium, adolescent drinking in the Nordic countries started to decline³. Drinking is now less common among underage young people in all Nordic countries compared to the situation some 10 or 15 years ago. The decline concerns both the number of drinking occasions (prevalence of drinking) and the amounts of alcohol consumed (Brunborg et al., 2014).

Until around the millennium, adolescent drinking in the Nordic countries followed the trends in total alcohol consumption quite closely. This changed after the 1990s: while the total consumption of alcohol in the whole population increased, youth drinking started to decline. This development has been much analysed in Norway, Finland, and Sweden (Bye, 2012; Vedøy & Skretting, 2009; Lintonen et al., 2000; Svensson, 2013), and has also been studied in Iceland (Bjarnason, 2006).

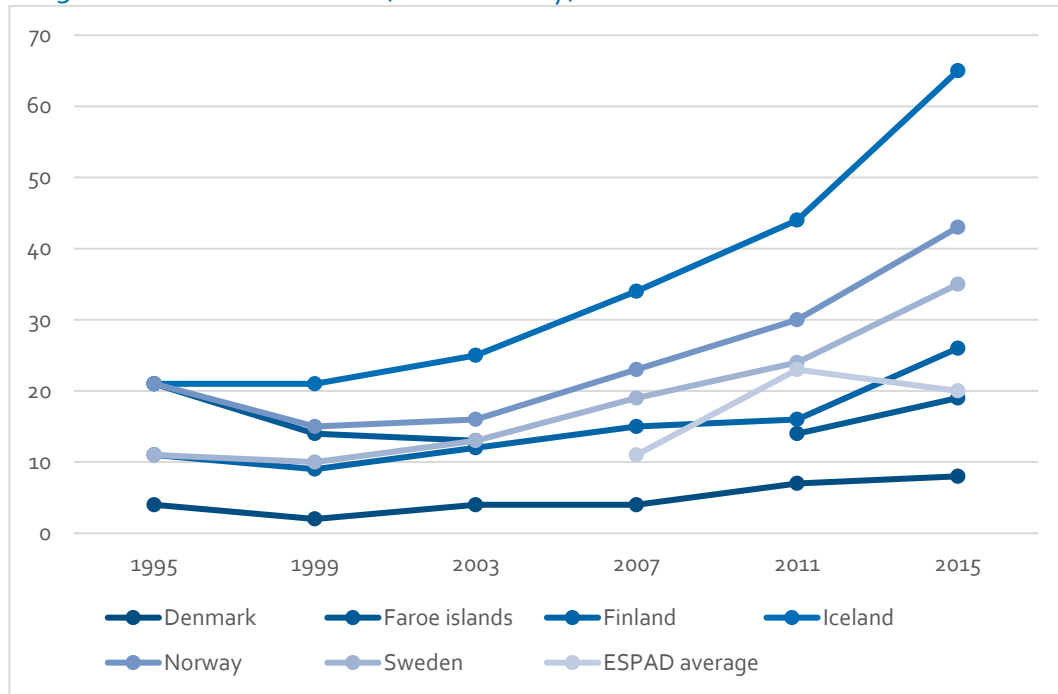
Youth drinking seems in part to follow its own logic and cannot be entirely explained by the same factors that influence adult drinking (although there are also many similarities) (Raitasalo, Simonen, Tigerstedt, Mäkelä, et al. 2018). This conclusion is further supported by the fact that a decline in adolescent drinking has also been observed in countries with differing alcohol policies, differing economic situations, and with differing trends in adult drinking (Pape et al., 2018).

Similar trends have also been observed in the US, Canada, Australia, and the UK. Adolescent drinking has in fact declined (Pape et al., 2018) in most of Europe. The average percentage of young people who have ever drunk alcohol in their lives in all of Europe declined from 89% in 1995 to 80% in 2015.

³ While the trends and developments in young people's drinking lean towards a similar direction in all Nordic countries, the actual levels of drinking and the timing of the changes differ from one country to another.

The declining trend in drinking has been particularly strong in the Nordic countries⁴ (Kraus et al., 2016; Pape et al., 2018; de Looze et al., 2015).

Figure 1 Prevalence (%) of young people who have never drunk alcohol 1995-2015 in the Nordic countries (ESPAD study)

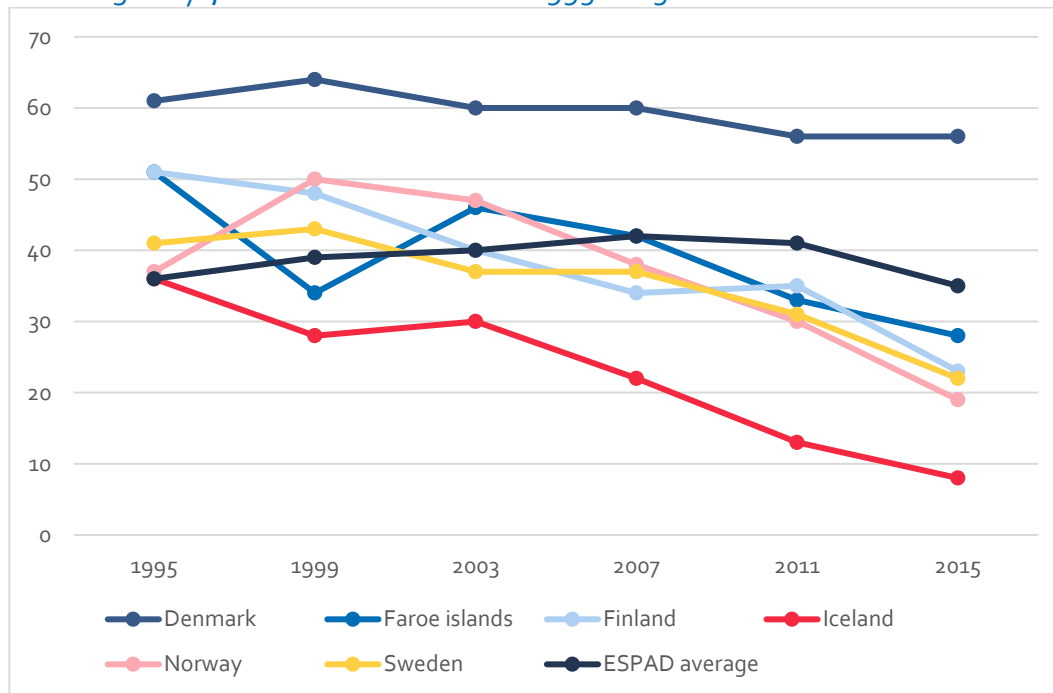


There are indeed many similarities in the Nordic countries regarding the declining trend of drinking. Adolescents in all Nordic countries are older when they drink or get intoxicated for the first time. Among those who do drink, there has been a decline in both the number of drinking occasions and the share of heavy drinking (Raitasalo et al., 2015; Bye & Skretting, 2013, Raninen, 2013). Girls' and boys' drinking habits have become more similar (Demant & Törrönen, 2011).

Figure 1 shows the share of 15–16-year olds who have completely abstained from alcohol in their lifetime in the Nordic countries in 1995–2015. Two things stand out. Firstly, in all countries the share of young people who have never drunk alcohol has increased during this time period. Secondly, the differences between the Nordic countries have grown. In 2015, the percentage of abstainers was 65 in Iceland and 8 in Denmark.

⁴ The trend has also been strong in Ireland.

Figure 2 Prevalence (%) of heavy episodic drinking (five drinks or more) during the last 30 days, in the Nordic countries 1995-2015. ESPAD



The 2015 ESPAD report shows that Iceland and Norway had the lowest percentage of young people who report having been drunk during the last 30 days or consuming more than five alcohol units during the last 30 days. Denmark scored above the ESPAD average (Bye & Skretting, 2017), and thus continues to serve as the 'Nordic exception'.

Adolescent drinking seems to be affected by national particularities. Such particularities can be seen in the (adult) drinking culture at large and in youth culture and youth drinking culture – along with a number of other factors (economic fluctuations, alcohol policies, etc.). Chapter 4 will discuss the most recent developments in youth drinking and overall developments in the Nordic countries one by one. Chapter 5 discusses harmful consequences of alcohol use in adolescence and how these may be reduced when adolescents drink less. Chapter 6 will review what we know about the developments in drinking in different groups. Are all groups of young people drinking less or is some group drinking more?

Along with the decline in drinking there has been a reduction in many other problem behaviours among Nordic adolescents. Smoking has declined tremendously among 15–16-year-olds. However, the use of snuff and e-cigarettes has

on the whole not declined (Kraus et al., 2016). There appears to be less delinquency and truancy among Nordic adolescents, who seem to be increasingly well-adjusted, to focus on school and organised activities, and to spend more time with parents and at home (Bakken, 2017; Øia & Vestel, 2014). Whether or not these and many other contemporary changes in society play a part in explaining and framing the decline in adolescent drinking will be discussed in chapter 7. Chapter 8 takes up some important issues that should be studied further.

4.1 Denmark

Alcohol use among adolescents in Denmark is common in both the Nordic and the European context, as is intoxication-oriented drinking (Statens Institut for Folkesundhed, 2018a). In 2015, 90% of Danish 15–16-year-olds reported at least having tried alcohol during the last year. The share of adolescents who had drunk alcohol during the last month was 73%, whereas the European average was 48%. The share of young people who reported intoxication during the last month was 56% in Denmark compared to the European average of 35%. Cannabis use was less prevalent than in Europe on average: 12% had ever tried cannabis in Denmark, while the European average was 16%⁵ (Kraus et al., 2016).

The use of alcohol has become relatively less common also among Danish adolescents. From 1984 there has been a steady decline in the share of young people aged 11, 13, and 15 who have been drunk. The most marked decline has occurred after 2010. Numbers from the cross-national Health Behaviour in School-Aged Children study (HBSC) further show that the age of alcohol debut has risen (Sundhedsstyrelsen, 2015). While the Danish rate of cannabis use is now lower than the European average, it is still the highest in the Nordic countries (Kraus et al., 2016).

In Denmark *the legal age for buying beer and wines is 16*, whereas it is 18 in the other Nordics. This impacts Nordic comparisons in many ways (see also section 5.1).

⁵ In Denmark the prevalence for lifetime use of cannabis fell under the ESPAD average only in 1995. Indeed, the ESPAD results show that the prevalence has declined markedly in Denmark since 2007. However, in the light of other information it is possible that these numbers are not completely accurate. The response rate to the ESPAD studies has also declined (a lot) in Denmark. Based on knowledge from other school surveys in Denmark (that the response rate is very low in the Copenhagen area in the two most recent ESPAD surveys) we know that the prevalence of cannabis use is much higher in the capital area than in the rest of the country and, thus, we might underestimate the true prevalence. Data from other surveys (such as the national health survey) shows that the prevalence of cannabis use is very stable in this age group (and has remained so in the last two decades). It will be very interesting to see the 2019 ESPAD results, where schools from Copenhagen will have been oversampled to account for this 'selection bias'.

There is a traditionally liberal alcohol policy in Denmark that relies on individual control rather than on public regulation (Elmeland & Kolind, 2012; Elmeland & Villumsen, 2017⁶).

A Danish study followed a sample of youth between the ages of 15 to 25, examining how their drinking behaviours developed during this time.⁷ Three major 'Danish' traits were identified in the drinking trajectory groups as compared to international trajectory-type studies. The study found that the groups of cautious users were small. The largest groups used alcohol in large amounts in young adulthood, with some decline in the amounts with age, or continued using copious amounts also in young adulthood⁸ (Bastholm & Järvinen, 2018).

Alcohol use and intoxication have traditionally had a positive role in Danish youth culture as a means of constructing maturity (Demant & Krarup, 2013; Demant & Järvinen, 2006). Many young people in fact have their first drink at home (Møller, 2002).

A survey on Danish adolescents⁹ focused on what it takes to start drinking in a country like Denmark, where drunkenness among young people is commonplace and there are few abstainers among adults. A decisive factor is the demystification of the risk experience associated with alcohol intoxication and the fact that one learns to find pleasure in losing control. Both the adolescents and their parents share this perception albeit for different reasons (Østergaard, 2009).

⁶ A study using focus group interviews among adults and young adults by Gronkjaer et al. (2011) suggests that alcohol is widely accepted and associated with mutual expectations to drink, leading to identification of cultural influences and facilitation to drink.

⁷ The sample consisted of register data and three surveys of young people born in 1989 and interviewed in 2005, 2008, and 2015. The sample totalled 2000 adolescents, with a response rate of 72% in 2005, 67% in 2008, and 50% in 2015.

⁸ First, cautious alcohol users represented two small groups and made up 6% and 5% of the sample, respectively; these adolescents came from a non-Danish ethnic background or had very high school motivation/achievement. Second, there were two relatively large groups who could be characterised by having a 'fling' with alcohol: their consumption was high at the age of 18/19 and slightly declined when they grew older (less however than in the reference group 'stable moderate'). These groups of relatively high consumption (although falling with age) had social drinking patterns and made up 13% and 29% of the sample, respectively. Third, there was a small group of alcohol users – the 'chronic high' group (6%) – that started out using large amounts of alcohol and whose alcohol use increased with age.

⁹ A survey on 2000 Danish adolescents aged 15–16 years, 28 focus group interviews with adolescents, and 8 focus group interviews with parents.

The Ungdomsprofileundersogelse [Youth profile study] of 2014 (Statens Institut for Folkesundhed 2018a) shows that young people aged 16–25 at high schools and vocational schools who drink large amounts or who drink often differ from those who drink more seldom. Interestingly, those who drank more often had parents with high socioeconomic status or education (and the parents often thought it was ok for the young people to drink). Negative consequences of alcohol use were more often experienced by young people at vocational schools (33%) than high schools (10%).

There are *official efforts to curb drinking or harmful drinking* among young people especially in the 16–20 age group. For example, the absolute majority of high schools and many vocational schools have policies regarding alcohol use on school premises (Sundhetssyrelsen, 2018a). There are also official campaigns to keep youth drinking at a minimum or at least below the limit for low-risk consumption. A recent campaign is the 'Meget mere med' [A lot more present] that is directed at young people aged 16–20 years (Sundhetsstyrelsen, 2018b).

Critique toward the adolescents' intoxication-oriented cultures comes from many directions. A recent survey asked whether 16–20-year-olds thought that there was too much drinking at their high school or vocational school. More respondents felt that this was the case than in the previous similar study; 52% of the young people thought there was too much drinking, and 44% believed there should be more rules concerning drinking (Sundhetsstyrelsen, 2018a).

The interplay between changes in youth culture and drinking habits is an area where researchers see a need for further study (Kolind et al., 2013).

4.2 Finland

The overall trend in Finland during the last 10 years shows that an increasing share of adolescents (15-year-olds) do not drink alcohol at all and those who do, drink less than generations before them. In 2015, 26% of ninth graders reported having never drunk alcohol, while the corresponding figure in 1999 was 14% according to the ESPAD study. The share of young persons who reported being drunk at least once a month had dropped from 48% in 1999 to 23%. The trends are similar both among girls and boys. Young people are also older when drinking for the first time. The average age of the first drink has risen. In 1995 75 % of adolescents had drunk beer (the most common alcoholic beverage) at the age of 14 or younger but in 2015 the corresponding percentage was only 36 %. (Raitasalo et al., 2015.).

Smoking has similarly declined among 15–16-year-olds (snuffing and using e-cigarettes have not). The share of young people who have tried drugs has not changed. Cannabis is the most common drug used by young people. The attitudes toward especially cannabis use have become more lenient; today young people do not perceive cannabis to be as risky as young people did 10 years ago. The ESPAD study shows that adolescent cannabis use increased somewhat in the 1990s but has stabilised or even decreased after the turn of the millennium: in 2015, 7% of Finnish adolescents reported having ever tried cannabis (Raitasalo et al., 2015).

Girls' and boys' drinking habits have as a whole become more similar. However, at the time of writing the numbers of drinking occasions and occasions of drunkenness are still higher among boys than girls (Kouluterveyskysely, 2017).

The most recent school health study indicates that *abstinence has continued to increase* between 2015–2017 among ninth graders, as well among second graders in high school and vocational school. However, the *decreasing trend seems to have levelled off concerning frequent binge-drinking* (at least once a month) and frequent drinking (at least once a week)¹⁰ (Kouluterveyskysely, 2017).

Research on the same data also indicates that although Finnish adolescents' drinking has declined overall, there are changes in the drink of choice. The popularity of beer, cider, and wine has declined whereas spirits and alcopops have become more popular (Lintonen et al., 2018).

There are still some problem groups. Torikka and colleagues (2017) observed that in 2000–2011, the general decrease of alcohol use was contrasted by the likelihood of frequent drinking and drunkenness among adolescents who were depressed and had unemployed parents with low levels of education.¹¹

In Finland it seems that there is *no polarisation tendency* of drinking habits according to drinking frequency.¹² However, we lack a detailed analysis of different

¹⁰ Girls reported sobriety (51.7%) a little more often than boys (54.6%) in 2017 (in 2016 the percentages were almost equal). Boys (6.5%) also report weekly alcohol use to a higher degree than girls (3.5%), and being 'really drunk' once a month or more is more common among boys than girls.

¹¹ During 2008–2011, the prevalence of frequent drunkenness was 75.8% among the boys in this group, whereas the corresponding prevalence was 2.3% for boys without depression and with highly educated, employed parents. The corresponding figures for girls were 41.7% and 1.4%, respectively.

¹² *Collectivity* refers to the situation where, when the level alcohol use declines among young people, all drinking groups drink less, both those who drink smaller amounts and those who drink more drink less than they used to (cf. Skog, 1968).

drinking groups of young people – those who drink a lot compared to those who drink less – and their corresponding developments over time.

A study by Karvonen (2010) suggests a slightly increasing differentiation of drinking habits according to the adolescents' academic achievement and according to whether they are active participants in extracurricular activities. Karvonen talks about 'lifestyle polarisation'.¹³ In the overall picture, drinking has declined both in urban and rural environments (with a slight decrease in differences), and in many other segments of young people's lives to a similar degree (Karvonen, 2010).

In sum, even if there are some signs of the decreasing trend levelling off, today's adolescents have much 'drier' drinking habits than did young people 10 or 15 years ago. Drinking has declined quite evenly in all consumption groups; Both those the heavy-drinking group and the group that drinks less drinks less than before. However, there are also problem groups. A particular at-risk group are depressed young people with unemployed parents with low levels of education.

4.3 Iceland

High levels of cannabis and alcohol use among adolescents received much attention in Iceland in the 1990s¹⁴. A great deal of attention was also earned by the decreased alcohol and cannabis use that followed.

Over the past two decades, the alcohol consumption of Icelandic adolescents has decreased dramatically, more than in any other Nordic country. According to the ESPAD study, the share of abstainers in Iceland grew from 20.8% in 1995 to 65.5% in 2015. The prevalence of students (aged 15–16) who had consumed alcohol during the last 30 days in 2015 was 9%, while heavy episodic drinking during the last 30 days was reported by 8% of the students. The prevalence for lifetime use of cannabis and of other drugs was 7% and 3%, respectively (Kraus et al., 2016).

¹³ Other literature calls such differentiation according to social background *hardening* and not polarisation (see for example Pape et al., 2018).

¹⁴ For example, adolescent alcohol use increased in the short run following the legalisation of beer in 1989 (Olafsdottir, 1999). The reform allowed the sale of beer stronger than 2.25% on March 1, 1989 after a 74-year-long ban and produced a 23% spike in national alcohol sales between 1988 and 1989, but by 1993 alcohol sales had reduced to the same level as in 1988 (Olafsdottir, 1999). The legalisation of beer did however transform the Icelandic alcohol culture, which was previously dominated by distilled spirits. Beer quickly became the most prevalent type of alcohol consumed by all sociodemographic groups (Olafsdottir, Gudmundsdottir, & Asmundsson, 1997).

In their study on frequent use of alcohol and cannabis, Arnarsson and colleagues (2018) established that both the overall use and the frequent use of alcohol decreased dramatically in Iceland in 1995–2015. The proportion of students who had consumed alcohol 40 times or more decreased from 13.7% in 1995 to 2.8% in 2015. There was however a marked increase in the prevalence of those who had used cannabis 40 times or more in the same period, from 0.7% to 2.3%. This group also had many other problem behaviours.

Bjarnason and colleagues (2006) found that while Icelandic adolescents drank increasingly less in 1995–2003 both in terms of amounts and drinking occasions, heavy drinkers did not drink any less. In fact, adolescents who consumed alcohol regularly increased their drinking in 1995–2003. More studies should be conducted on the post-2003 situation (cf. Arnarsson et al., 2018).

In Iceland, then, where the decrease in drinking has been most drastic, some adolescent groups seem to have developed more extreme drinking habits: those who are not able to keep up with the conscientious majority culture appear to be having a harder time. An Icelandic study from 2009 indeed finds support for relative deprivation: social comparisons contextualise how people experience economic struggles, for example. This study with 5491 Icelandic young people showed that the effects of economic deprivation on adolescent anger, normlessness, delinquency, violence, and subjective relative family status were weak in school communities where economic deprivation was common, while the effects were significantly stronger in school communities where economic deprivation was rare (Bernburg et al., 2009).

4.4 Norway

The most recent ESPAD report (Bye & Skretting, 2017) indicates that *drinking among Norwegian 15–16-year-olds in 2015 is at its lowest level since 1995*, as is tobacco use.

The proportion of Norwegian 15–16-year-olds who reported that they had *ever drunk alcohol* declined from 85% in 1999 to 59% in 2015. The proportion reporting drinking during the *past 12 months* decreased from 78% in 1999 to 49% in 2015, and the share of those who had consumed alcohol during the past 30 days decreased from 55% in 1999 to 24% in 2015. There was also a decline in the number of drinking occasions during the same period. In 2015, there was no difference between girls and boys on whether they had ever drunk alcohol or had drunk alcohol in the past 12 months, while there were *more girls* than boys who *reported drinking* in the past 30 days (Bye & Skretting, 2017).

The very latest Ung Data study, from 2018, seems to indicate that the decline in alcohol among adolescents (pupils in classes 8 to 10 in the Norwegian compulsory school) use may have levelled off at this low level (Bakken 2018). However, it is impossible to tell whether this is a break in the trend or not.

Cannabis use among adolescents is at a low level in Norway according to the ESPAD study from 2015¹⁵. (Bye & Skretting, 2017). The most recent UngData studies show small signs of increase in the use of cannabis, particularly noted in Oslo. Compared to previous studies, a larger share of young people had been victims of bullying or violence, or reported issues of ill health across all socioeconomic groups. There are some differences between Oslo and the rest of the country: cannabis use has been found to be more prevalent in Oslo in other studies, too, but most factors are similar throughout the country (Bakken, 2018).

A feature of the adolescent drinking scene in Norway has been given much attention. This is the so-called *russetid* celebrated by many young people at high school graduation, including plenty of alcohol during several days (Fjær et al., 2016). Although the celebrations are not attended by all adolescents, an analysis of the Norwegian health care registers (Norsk Pasientregister) from 2007–2011 shows that the month of May (when the *russetid* takes place) is the time of year with the highest number of hospital stays for injuries among 19-year-olds. The 19-year-olds also had relatively more injuries compared to the 16-year-olds and those aged 21, and head injuries were overrepresented during this time (Austdal et al., 2015).

Norwegian youth drinking seems to have declined fairly evenly among different types of drinking groups, suggesting a collective change of drinking habits. An analysis of the Norwegian ESPAD data in 1995–2011 showed a strong relationship between mean alcohol consumption and the proportion of heavy drinkers. An increase in the mean consumption among adolescents was also associated with an increase at all consumption levels, from light to heavy drinkers. The findings of this study suggest that by reducing the total consumption of alcohol among adolescents, consumption and the risk of harm may be reduced in all consumer groups (Brunborg et al., 2017).

¹⁵ The share of 15-16 year olds who had used cannabis sometime in their lives decreased from 12,3 % in 1999 to 6,5 in and the share who had used cannabis during the last month decreased from 9,1 % in 1999 to 5,3 % in 2015.

4.5 Sweden

While Denmark stands out as a 'wet' nation in terms of adolescent drinking, Sweden now represents a 'drier' end. Drinking among Swedish 15–16-year-olds halved during 2000–2012 (Thor & Landberg, 2017). The prevalence of adolescent drinking was at its highest in the 1970s when the measuring of youth drinking started: around 90% of young people had consumed alcohol. Between the 1980s and 1990s the prevalence of youth drinking was around 80%, but has decreased drastically since the turn of the millennium (Thor et al., 2017). Youth consumption kept falling and non-drinking rates continued to rise defying higher availability and increasing population drinking. Youth drinking followed per capita consumption and adult consumption during the last two decades of the 20th century, but developed an independent trajectory shortly before 2000 (Norström & Raninen, 2015).

The prevalence of alcohol users is at a historically low level in 2017 both among ninth graders and high school second graders according to the school study Skolelevers drogvanor, conducted annually by The Swedish Council for Information on Alcohol and Other Drugs (CAN). In the 2017 study, 40% of ninth graders and 74% of second graders in high school reported having drunk alcohol ever in their lifetime (Thor et al., 2017).

A slightly higher percentage of ninth-grade girls admit to drinking than boys; 43% of girls and 37% of boys in 2017. The difference is statistically significant. The amount of alcohol consumed (as 100% alcohol) was unchanged among ninth graders (1.2 litres) but increased slightly among high school second graders compared to 2016 (Thor 2017b). The average age for the first drink is higher, and the average age for the first intoxication is now 14 (Raninen, 2013).

There are some signs that the declining trend would be evening out. The preliminary results from the most recent survey support such levelling off among ninth graders but the decline seems to have continued among second graders in high school. The researchers are careful to point out that the prevalence for drinking is at a historically low point also for ninth graders (less than 40% have ever tried alcohol) (Englund, 2018).

Some surveys suggest that a decline in drinking also seems to indicate less harm, at least when young people self-report such harm (Thor, 2017a). However, there was an increase in alcohol-related hospitalisations among young people in Sweden during the same time (Svensson, 2013). Svensson and Landberg (2013) furthermore found that the aggregate link between alcohol and violence has become weaker now that drinking is less common.

It seems that drinking has declined relatively evenly among youth in all Swedish drinking groups (Raninen et al., 2014). A study by Norström and Svensson (2014) found that when drinking declined, both those who drank a lot and those who drank less had started to drink less. Still, the relative decrease was smaller for heavy drinkers (top 5%) than for light drinkers (below the median). Drinking has also declined regardless of differences between different groups with a number of risk factors for drinking (Norström & Raninen, 2017).

However, there is some evidence of a group in the capital city of Stockholm where drinking has increased even though drinking has declined on the overall level. Some other regional varieties also emerge when it comes to harmful consequences of drinking (Hallgren et al., 2012; Hallgren, 2014).

The most recent biennial study of the city of Stockholm – the so-called Stockholmsenkäten from 2018 – shows that capital stands out as an area where drinking and drug use are both more common than in the rest of the country (Socialförvaltningen, 2018). It is not uncommon that (Nordic) capital cities tend to have more prevalent drinking or other delinquent behaviour (Bakken, 2018).¹⁶

The Stockholm studies also indicate that young people living in the more affluent neighbourhoods of Stockholm are overrepresented among drinkers and as users of cannabis and other drugs (Berggren et al., 2016). This is not a rare finding, either: young persons who have more resources are overrepresented among drinkers in other studies, too, while it seems that their alcohol-related harms are not as pronounced (Pedersen, Bakken, & von Soest 2017).

So, although drinking has declined to a high degree, some problem groups exist. There are still adolescents who use cannabis and also drink frequently. According to a study on the risky alcohol consumption by adolescents who seek treatment at the Maria clinics in Stockholm, Gothenburg, and Malmö for abusing cannabis, the alcohol use is related to drug use patterns and to different background and risk factors. The study distinguished nine risk factors – including mental health and socioeconomic status – that were strongly related to their combined use of cannabis and alcohol. Attention therefore needs to be paid to adolescents' risky alcohol consumption, and, if necessary, specific interventions targeting alcohol problems should be provided (Anderberg & Dahlberg, 2015).

The most recent school study on alcohol and drugs by CAN included a new question on whether the young people had felt gloomy, depressed, or low in spirits.

¹⁶ There are obviously other factors at play, too, but better availability of drugs seems to entail more drinking.

It showed that the use of alcohol and drugs was more common among those who said they were feeling low or depressed several times a week compared to peers who were feeling low only once a week or not at all. It is important to follow up on this in the next survey to establish where this trend is headed (Englund, 2018).

4.6 Adolescent use of cannabis in the Nordics: A few notes

According to the 2015 ESPAD report, the share of young people in the Nordic countries who have tried cannabis, the most common drug, has remained stable.¹⁷ The use of other drugs is relatively uncommon (Kraus et al., 2016). However, a recent Norwegian study (Young in Oslo/Ung i Oslo) indicates a slight increase in cannabis use and delinquent behaviour among adolescents in Oslo. UngData studies for the entire country point to similar findings (Bakken, 2018). No reports on an increased prevalence of trying cannabis have come from the other Nordic countries yet.

A concern that declining alcohol use would mean substituting alcohol with cannabis is not supported by current Nordic research. *Cannabis has not replaced alcohol*. In fact, the absolute majority of cannabis users also use alcohol (Bye & Skretting, 2017; Raitasalo, Tigerstedt & Simonen, 2018). A Norwegian study argues that *cannabis is a complement to rather than a substitute* for alcohol. A study using ESPAD data showed that polysubstance use was especially prevalent in countries where cannabis use was relatively widespread and alcohol was consumed rather frequently. It concludes that because adolescents most often combine cannabis with alcohol, their use of the drug may be quite harmful. Policies that reduce adolescent drinking may reduce the use of cannabis as well (Pape, Rossow, & Storvoll 2009). It is important to continue mapping trends in simultaneous alcohol use and cannabis use to see whether this trend continues and what the polydrug group looks like in terms of background factors and harmful outcomes of the substance use.

¹⁷ In Denmark the prevalence for lifetime use of cannabis fell under the ESPAD average only in 1995. Indeed, the ESPAD results show that the prevalence of cannabis use has declined markedly in Denmark since 2007. However, in the light of other information it is possible that these numbers are not completely accurate. The response rate to the ESPAD studies has also declined (a lot) in Denmark. Based on knowledge from other school surveys in Denmark (that the response rate is very low in the Copenhagen area in the two most recent ESPAD surveys) we know that the prevalence of cannabis use is much higher in the capital area than in the rest of the country, and we might thus underestimate the true prevalence. Data from other surveys (such as the national health survey) shows that the prevalence of cannabis use is very stable in this age group (and has been extremely stable in the last two decades). It will be very interesting to see the 2019 ESPAD results where we will have oversampled schools from Copenhagen to account for this 'selection bias'.

Also, we need to bear in mind that the attitudes towards cannabis use have become more lenient: today's adolescents do not perceive cannabis to be as risky as young people did 10 years ago. Cannabis use has indeed increased among young adults in the Nordic countries (Raitasalo., Tigerstedt & Simonen 2018; Egnell et al., 2018).

4.7 Summary of chapter 4

- In the 1980s young people's drinking seemed to be constantly increasing.
- Around the end of the 1990s youth drinking started to decline while adult drinking continued to increase for some time.
- Declining trends in adolescent drinking have also been observed in many European countries, Canada, the USA, New Zealand, and Australia.
- The decline has been observed in countries with differing alcohol policies, differing economic situations, and with differing trends in adult drinking.
- It seems that the reasons behind young people's drinking may be partly different from those behind adult drinking.
- The declining trend is strongest in the Nordic countries and Ireland.
- Within the Nordics the decline has been steepest in Iceland and weakest in Denmark.
- Sobriety among adolescents has become more common in all Nordic countries. Those adolescents who do drink, drink smaller amounts, and there are fewer drinking occasions. Young people are older when they take their first drink and become intoxicated for the first time.
- Along with less drinking there has been a decrease in other norm-breaking behaviours such as youth delinquency and truancy.
- Smoking has declined among 15–16-year-olds (whereas snuffing and using e-cigarettes have not).
- The share of young people who have tried drugs has not changed. Still, a recent study from Norway shows an increase in the proportion of adolescents who have used cannabis.
- Cannabis is the most common drug. Cannabis has **not** replaced alcohol. The absolute majority of cannabis users also use alcohol and they are often used in combination.
- Attitudes toward cannabis use in particular have become more lenient; young people no longer perceive cannabis to be as risky as they did 10 years ago.
- Cannabis use among *young adults* has increased.

- Some signs suggest that the declining trend in drinking would be evening out at this low level in some Nordic countries, but it is too early to talk about a break in the trend yet.

5 Harms associated with adolescent alcohol use

Young people are more prone to negative outcomes of drinking compared to adults (Jackson et al. 2014). Adolescent alcohol use is connected to a number of negative consequences such as traffic accidents, violence and injuries, unwanted sex, health problems, and depression (Helmersson & Bergmark, 2010; Danielsson, 2011). Some harms occur at the time of intoxication as a direct consequence of the drinking, while other harms are indirect associations. Alcohol use in adolescence is also a risk factor for problem behaviours in adulthood, especially related to the use and misuse of alcohol and other substances (Helmersson & Bergmark, 2010).

The following chapters will look at some Nordic studies on harms connected to adolescent drinking. Now that adolescent drinking is less frequent, we may expect a reduction in some of the harms.¹⁸ This will be discussed more closely in section 5.5.

5.1 Drinking is delinquent as such

Using alcohol may be seen as norm-breaking or delinquent behaviour, as adolescent alcohol use is in most cases forbidden or restricted (Obstbaum, 2006). Alcohol use among adolescents in the Nordic countries is restricted by law in different ways. Norway and Sweden forbid the selling of alcohol to those below the legal age of 18. In Denmark, the legal age of buying alcohol (under 16.5%) is 16. To buy alcohol over 16.5% and to be admitted into bars, one has to be 18. It is illegal for minors to consume alcohol in Finland; minors are not allowed to buy alcohol, and public drinking may bring them into contact with security guards or the police (Saarikkomäki, 2017).

Despite these restrictions many adolescents at least try alcohol, and some drink more regularly (Lintonen et al., 2016; Kraus et al., 2016).

¹⁸ Some of the decline in adolescent problem behaviours (such as some types of delinquency) may have to do with the decline in alcohol use (see for example Lavikainen et al., 2011). It is however probable that there are also other factors behind the decline in problem behaviours, as there are factors that impact both alcohol use and problem behaviours simultaneously (cf. Bakken et al., 2017).

Intoxication-oriented drinking style is strongly associated with a range of alcohol-related harms in adolescence. A study based on a Finnish survey of self-reported delinquency indicated that physiological and social harms were closely connected with situational heavy drunkenness, whereas delinquency and sexual risk-taking behaviour were associated with both drunkenness and frequency of drinking at large (Lavikainen, 2011).

Early onset of intoxication has a stronger connection to a range of subsequent adverse outcomes in adolescence compared to early drinking experiences without intoxication (Lavikainen, 2011; see also Kuntsche et al., 2013).¹⁹

Drinking alcohol in adolescence is in itself a risk factor for *heavy drinking in adult life* (Pitkänen et al., 2005). *Early initiation of alcohol use increases the risk* for problems related to alcohol use later in life (Pedersen & Skrondal, 1998). Heavy episodic drinking in adolescence is in many studies connected to problem drinking in early adulthood (Brunborg, Norström, & Storvoll, 2018).

Drawing on their study with longitudinal data on Norwegian youth, Norström and Pape (2012), however, point out *that many adolescents who drink heavily when young do not continue to do so in young adulthood, and conversely, many young adults who drink heavily have not done so in adolescence*. Population-level attributes are important, and the researchers stress that preventive programmes or measures should target the entire adolescent population, not only a small group of excessive drinkers (Norström & Pape, 2012).

A recent Finnish cohort study²⁰ suggests that frequent heavy episodic drinking which continues from adolescence to midlife matters most for subsequent disadvantage in life. It is however possible that frequent heavy drinking that is reduced after adolescence does not leave any permanent scars on a person's well-being²¹ (Berg et al., 2013).

¹⁹ Also, early smoking is a risk factor for heavy drinking in adolescence, as was shown in a follow-up study of Swedish 13-year-olds (Danielsson et al., 2011).

²⁰ Finnish-speaking ninth-grade secondary school pupils were studied in the spring of 1983 in Tampere, Finland with follow-ups at ages 16, 22, 32, and 42.

²¹ A steady high trajectory for both men and women, and an increasing trajectory for men were associated with most disadvantages in midlife. Among men, the increasing trajectory was associated with poor health, depression, difficulties to cover expenses, and not being a house owner. A steady high trajectory was associated with economic disadvantage.

5.5 Declining alcohol use impacts alcohol-related harm

Does less drinking mean less harm from drinking among adolescents? The answer seems to be yes: alcohol-related harm among young people in the Nordic countries seems to be connected to the **level of drinking** among youth at large, but the connection is not straightforward (Norström & Raninen, 2015).

For example, in Sweden the decline in adolescent alcohol use coincided with a reduction in the prevalence of self-reported alcohol-related harm in 1995–2012. There was an even stronger association with the prevalence of binge-drinking (Thor et al., 2017).

Not all alcohol-related harm has decreased. Although drinking has declined among young people in Sweden, there has been an increase of alcohol-related hospitalisations among young people (Svensson, 2013).

Generally, less drinking indicates less harm. In particular, the rising age of the first drink and the first intoxication have positive effects on the number of harms (Thor et al., 2017; Raninen, 2018; Pitkänen et al., 2008).

5.5.1 Notes on the alcohol–violence connection

The levels and patterns of alcohol use are strongly connected to the level of *violence* among adults (Takala & Obstbaum, 2009). The alcohol–violence association among adults is stronger in countries where the drinking is relatively more intoxication-oriented. This also seems to be the case among young people (Bye & Rossow, 2010).²²

Still, the relationship between the total consumption of alcohol among adolescents and the level of violence seems to vary within a country at different times. A Norwegian study showed that the relationship between the total consumption of alcohol and alcohol-related violence among young people became weaker among adolescents and young adults in Norway during a period when total alcohol consumption was significantly higher (Bye & Rossow, 2008).²³

²² Bye and Rossow compared young people's violence in ESPAD data on 15–16-year-olds in 13 countries in 2003. The countries were divided into categories of high, medium, and low levels of intoxication. The prevalence of alcohol-related aggression varied considerably across countries and was significantly higher in drinking cultures where intoxication was relatively more prevalent.

²³ 15–20-year-olds in Norway; the study period was 1990–2004.

So, what matters in violent incidents is not only of the amount of alcohol involved, but *how that amount relates to the amount consumed by other drinkers as a whole*. This implies that when alcohol use on the general level is higher, large amounts of alcohol intake and intoxication are deviant behaviours to a much lesser extent, and might therefore be associated with various problem behaviours to a lesser degree (Bye & Rossow, 2008 & 2011).

Svensson and Landberg (2013) have found evidence for an association between binge-drinking and violence among young people during a confined study period (1971–2000). However, the associations became for the most part non-significant during the full study period that included declining youth consumption rates (1971–2009). The Swedish study suggests that the relationship between alcohol use and violence might look different during times of declining alcohol use among adolescents.

5.6 Summary of chapter 5

- Drinking in adolescence heightens the risk for many types of harm: drinking is connected to negative somatic and mental health outcomes, and heightens the risk for risky behaviour (such as unwanted or unsafe sex), accidents, violence, and victimisation.
- Most Nordic countries forbid selling alcohol to minors. (The legal age for drinking is 18 in all countries except Denmark, where it is legal for 16-year-olds to buy alcohol with vol. less than 16.5% (e.g., beer and wine).
- The negative outcomes can occur at the time of drinking or more indirectly as a consequence of a lifestyle where drinking is one part.
- The level of drinking among youth is connected to the level of harm.
- Self-reported alcohol-related problems seem to be associated with the mean consumption level of alcohol among youth. There is an even stronger association with the prevalence of binge-drinking.
- Drinking style in adolescence impacts harm that is experienced both in the short and the long term. Intoxication-oriented drinking and binge-drinking particularly may lead to unwanted outcomes.
- Drinking in adolescence is connected to harms both in adolescence and in adult life.
- Early initiation of drinking and particularly early initiation of heavy drinking have a strong connection to problems in adulthood.
- Many direct harms of alcohol use in adolescence such as delinquent/risky/violent behaviour and health problems may be avoided when young people do not consume as much alcohol.
- Many long-term consequences (such as less probability for risky drinking) might be avoided, but this is less certain.

- Many adolescents who drink hard in adolescence do not continue to do so in adulthood, and many adults who drink too much have not done so in their youth. Preventive efforts should thus target entire populations of young people and not just a heavy drinking group.

6 Are all adolescent groups drinking less?

6.1 Has drinking declined in all consumption groups?²⁴

It has been suggested that the descending trend in underage drinking contains a differentiation or polarisation of youth drinking behaviours, so that abstainers or non-heavy drinking are counterbalanced by a minority of youth that drink more. But is there a group that has started to drink more heavily? It rather seems that drinking habits have for the most part declined evenly across drinking groups. As ever, though, there are also contradicting signs (Hallgren, 2012 & 2014; Norström & Svensson, 2014a & 2014b; Pennay et al., 2015).

In *Sweden*, Norström and Svensson (2014) argue for a reduction of drinking among all types of drinkers from light to heavy consumers (see also Raninen et al., 2014; Svensson, 2013)²⁵. A recent Swedish study analysed drinking and related harm in five risk groups that were based on drinking frequency and quantity, and harm. The study showed that drinking and alcohol-related harm decreased in all five at-risk groups with a marked relation to the overall consumption and the mean consumption in each of the five at-risk groups (Norström & Raninen, 2018).

An analysis of the Stockholm municipality, only, showed increased consumption and binge-drinking among the heaviest drinkers (top 5%), along with a decline in drinking among the other groups (Hallgren et al., 2012). Drinking habits and their developments among Stockholm youth seem to differ somewhat from the country at large (Hallgren, 2014; Bränström et al., 2008).

In Norway, too, there is support for drinking declining in all adolescent consumption groups. Analysis of the Norwegian ESPAD data for 1995–2011 supports the notion of drinking behaviour changing in a collective manner (Brunborg et al., 2014; see also Bye, 2011).

²⁴ To arrive at 'consumption groups', adolescents are placed into different groups based on their relative drinking frequency, resulting in, for example, a sober group, a group that drinks small amounts or moderately, and a heavy drinking group.

²⁵ In his analysis of Swedish adolescents, Svensson (2013) found that in 2000–2012 the decline in alcohol consumption was mirrored in all seven drinking groups examined. Furthermore, there was a marked relation between the overall consumption and mean consumption, as well as with heavy episodic drinking

In Iceland, however, where the decline in adolescent drinking has been the steepest it seems that although most young people drink less, a small population drink more, with concurrent or subsequent associated harms (Bjarnason, 2006). While Bjarnason's study comes from as far as 13 years ago, Arnarsson (2018) has found that even if alcohol use and cannabis use have gone down in Iceland, the group of young people who use cannabis more than 40 times – and also exhibit many other problem behaviours – has grown. The Icelandic example emphasises the fact that mixed use of alcohol and other drugs is a problem behaviour that should be looked at in detail in conjunction with other harmful behaviours.

It seems that Danish and Finnish studies on this aspect are still to be conducted.

6.2 How about a social differentiation in drinking?

Socioeconomic background impacts health behaviour in the population. The drinking behaviour is also impacted (Palosuo et al., 2007). *Unfavourable social background* indeed has a connection to a heightened risk for drinking in adolescence (Pape, Norström, & Rossow, 2017) and beyond (Berg et al., 2017).

There is also evidence for *young people with socioeconomically favourable backgrounds* being overrepresented among those who drink and those who drink larger amounts. There is recent evidence for this in Denmark (Statens Institut for Folkesundhed, 2018), Sweden (Berggren et al., 2016), and Norway (Pedersen et al., 2015). The explanations given by research often refer to this group's economic possibilities to obtain alcohol (Pedersen et al., 2015). Studies however show that although drinking is heightened in groups with higher socioeconomic background, the consequences of their drinking might not be as grave (Berggren et al., 2016; Statens Institut for Folkesundhed, 2018).²⁶

Adolescents' own 'choices' or future plans also affect the level of drinking. In most Nordic countries young people in less academic training (vocational school, etc.) tend to drink more than those in more academic training (Raitasalo, Tigerstedt, & Simonen, 2018). Also, the harms experienced from drinking tend to be more grave for those in less academic training (Berggren, 2016). A Finnish

²⁶ To determine young people's socioeconomic background is not easy. Many indicators of socioeconomic status (SES) used for adults are inappropriate for use in research on adolescents (Candace et al., 1997). Measures often include parental occupation. Adolescents' own assessments of their parents' occupation are usually fair, but the rate of non-respondents may be high (Lien et al., 2001). However, many SES measures have been developed especially for the use of adolescents. The Family Affluence Scale (FAS) has been examined particularly in the context of the Health Behaviour in School-Aged Children (HBSC) Study, and studies have suggested consistent inequalities in many aspects of self-reported health (Currie et al., 2008).

study by Karvonen (2010) shows *slightly increasing differentiation of drinking habits according to academic achievement* of the young people themselves and also according to participation in extracurricular activities; Karvonen talks about 'lifestyle polarisation'.²⁷

To what degree socioeconomic differences and changes therein have been important for the *decline* in adolescent drinking is not entirely clear (Raitasalo et al., 2018). A Finnish study suggests that a group of young people has started to drink more at a time when there has been a general decline in adolescent drinking. These young people come from an unfavourable social background and show signs of depression (Torikka et al., 2017).²⁸

According to a fresh literature review by Pape, Rossow, & Brunborg (2018), the available research evidence indicates that *teenagers across social strata drink less*, although some disadvantaged subgroups have not followed the downward trend. *Underage drinkers do not seem to have become a more deviant group, as the prevalence of drinking has dropped* the review indicates.

More studies are indeed needed that look on how socioeconomic factors might have impacted the decline in adolescent drinking.

6.3 Will future adult generations drink less?

Does the decline in adolescent drinking in the Nordic countries mean that coming generations also drink less when they are older and enter working life? The available research evidence does not necessarily support such a hope, even if some recent developments could be seen positively in this regard as well.

Lintonen and colleagues (2015) studied Finnish cohorts born between 1967 and 1995 and their drinking at the ages of 12–18. They found that, compared to the earlier cohorts, young people born in the 1990s had drunk alcohol less seldom at the ages of 12, 14, and 16. However, with 18-year-olds, there were hardly any differences between the cohorts. Also, a study by Raitasalo and Simonen (2011) has reached a similar conclusion: although drinking among 15-year-olds had de-

²⁷ Other literature calls such differentiation according to social background *hardening* and not polarisation (see for example Pape et al., 2018).

²⁸ Also, in Iceland, although both alcohol use and cannabis use have declined on the whole, a small group has grown which has used cannabis over 40 times and has a heightened prevalence of other harms. However, using alcohol 40 times or more has not increased (Arnarsson et al., 2018).

clined, the trends were increasing or steady among the 18-year-olds. Also, intoxicated drinking had increased among those aged 18. The drinking habits of the 18-year-olds resembled those of the adult population more than those of the 15-year-olds.

It is young adults and middle-aged people who still consume more alcohol than any other age group (Härkönen & Mäkelä, 2018). Being able to legally buy alcohol, coming of age, and the many events in young people's lives that this enables (working life entrance, academic or vocational studies, or none of these) all might have an effect on whether and how much a person drinks.

The *transition between secondary school and high school* may constitute a particular *risk period* for establishing problem behaviours. Targeting this period with interventions may be particularly important (Nordfjærn et al., 2013). Problems regarding the role of alcohol among adolescents at this stage of life has recently been given lots of *attention in Denmark*. The campaign 'gymnasier uden druk' encourages high school students not to drink even if they have reached the legal age of 16 for buying beer (Statens Institut for Folkesundhet, 2018b).

Regular studies on drinking particularly among college and university students as well as studies concerning drinking in young adulthood are not very common in the Nordic countries other than Denmark, and often lack follow-ups. This is an area where more Nordic studies are indeed needed.

Cohorts however do seem to 'take their drinking habits with them' into adulthood. For example, the so-called wet generation of the baby boomers have also drunk more alcohol in retirement than previous generations of older people (Karlsson, 2016), so it is not unreasonable to think that the effect of less drinking might have at least some effect in adulthood as well. However, adults' drinking habits are heavily formed by drinking habits in young adulthood (Härkönen & Mäkelä, 2018), even if adolescent drinking habits do play a role. It is therefore important to examine the reasons and patterns for drinking in young adulthood.

It is also not impossible that the drinking habits of young adults may change. We know that drinking habits change rather slowly (Room et al., 2002). The study by Lintonen and colleagues (2015) does not cover the most recent developments in adolescent drinking, as the last studied cohort was born in 1995. The more recent generations of young people may act differently when they come into drinking age. The most recent Finnish drinking habits survey indeed indicates a slight decline in drinking among young adults, too (Raitasalo, Tigerstedt, & Simonen, 2018). The question of how generations (cohorts) who have drunk

small amounts in adolescence will drink in adulthood is a question mark, and it is not possible to say anything certain based on current research.

Longitudinal research frames, where a group is studied multiple times in their life, are useful for studying traits in how drinking habits develop in different cohorts. Sweden is currently gathering data for a large longitudinal study (Futura 01, 2017).²⁹

Within cohorts, there are also different ways of drinking and different temporal developments of drinking through life. These are the different drinking trajectories. There are many factors in adolescence that seem to predict for example problem drinking in adulthood. Longitudinal research frames are also useful for studying factors that impact these drinking trajectories. For instance, will heavy drinking in childhood or adolescence carry into adulthood and which factors might hinder or promote negative developments? (See Berg et al., 2013; Pitkänen et al., 2008).

The ongoing Jyväskylä Longitudinal Study of Personality and Social Development (JYLS), conducted in Finland, indicates that problem drinking in early middle age is preceded by maladjustment to school, early age of onset of drinking, and heavy drinking in adolescence even more significantly than problem drinking in early adulthood (Pitkänen et al., 2008).

Also, in this context it is worthwhile to note the Norwegian study concluding that many young people who drink heavily when young do not continue to do so in young adulthood, and conversely, many young adults who drink heavily have not done so in adolescence (Norström & Pape, 2012).

Drinking cultures change slowly and in a collective manner (see more in chapter 7). It is a complex question whether the generations of young people who have been more sober than previous generations in the same age will continue to drink less. One factor is the formation of drinking habits, the cohort effect, while coming of age and adulthood bring variables of their own into the equation (Härkönen & Mäkelä, 2018).

The way that this generation of young people experiences adolescence, adulthood, and the inherent economic and social factors play a role in how their drinking habits will turn out. Further research is therefore needed into the influential factors in order to bring these issues onto the policy level.

²⁹ The aim is to gather data and follow 7000 young people born in 2001 for a long period of time to study factors that impact their lives.

6.4 Summary of chapter 6

- In most Nordic countries, a reduction in drinking has been observed among all types of drinkers from light to heavy consumers. Both those who drink a lot and those who drink less have started to drink less.
- However, some evidence suggests regional differentiation. In Stockholm, heavy-consuming groups have started to drink more. The development in Stockholm is different to the overall Swedish trends.
- The main studies on the polarisation vs. collectivity in adolescent drinking come from Sweden and Norway. In Norway, adolescent drinking is in all groups closely connected to the total consumption of alcohol among young people.
- Denmark and Finland lack studies that follow drinking groups over time.
- Unfavourable socioeconomic circumstances are connected to heavier drinking but also adolescents with well-educated and well-off parents are also overrepresented among drinkers.
- Socioeconomic factors are thus important for explaining differences between different drinking groups, but it is unclear to what degree if any changes in socioeconomic factors may have been reasons for the *decline* in drinking.
- *Drinking among adolescents seems to have declined quite evenly across socioeconomic strata, although there are some socioeconomically disadvantaged groups that have not followed the declining trend as far as we know currently*
- In Finland for example, adolescents with depression and unemployed parents have started to drink more.
- Also, there seem to be divisions in drinking along the lines of the young people's own education, so that academic performance is linked to less drinking.
- More research is needed that looks at the role of socioeconomic factors in the decline of adolescent drinking in different Nordic countries
- It is unclear whether the young people who drink less than previous generations as young will continue to do so when they reach adulthood (and are legally allowed to drink). Finnish studies indicate that once they reach the legal age for drinking, young adults tend to drink similarly from one cohort to another.
- However, some signs suggest that drinking might also be lessening among young adults.
- Drinking cultures change slowly.
- Longitudinal studies that follow young people to adulthood and point out protective and risk factors of drinking are important from a preventive point of view.

7 Possible reasons for the decline in adolescent drinking: Seven hypotheses from a Nordic perspective

Why do young people drink or why do they abstain from drinking? This is a huge question explored in quantities of research literature. The risk factors for adolescent drinking are many, pertaining to area level, school level, parental drinking, parental attitudes and permissiveness toward drinking, peers, leisure activities, available money, etc. (Pedersen et al., 2017). There is also the impact of marketing, official policies, economic factors, support for families, prevention, drinking culture, etc.

These explanations are informed by the realisation that adolescents' drinking habits are formed by their social environment and social contexts for drinking. A cornerstone of the alcohol policy agenda in the Nordic countries is the *theory on collective drinking cultures* articulated by the sociologist Ole-Jørgen Skog (1985). The theory assumes that a person's drinking behaviour is influenced by an array of factors related to, for example, hereditary factors, sociodemographic factors, family, and the community.³⁰ Ultimately, however, people's drinking habits are connected to the norms and the drinking culture that surround them. Drinking habits are thus formed in interaction based on groups in the social context. *Drinking habits and patterns are social phenomena.*

The collectivity of drinking behaviour also entails that it is meaningful to study the impact of the *total consumption of alcohol* on (young people's) drinking habits. (See more in section 7.3.3.1) Studies show that adolescent drinking habits are affected by the total consumption of alcohol in the entire population (Bendtsen et al., 2014). The link has however become very much weaker among young people, which means that other explanations to adolescent drinking are increasingly important to study (Raninen, 2015).

³⁰ Important social factors connecting to youth drinking are the school, neighbourhood, drinking among peers and friends, parental influences, and influences from the media (social media included). This perspective does not exclude the influence of genetic or personality factors (such as impulsivity) but rather frames them and explains why they can work differently in different cultures (Dick et al., 2009).

The jury is still out on which factors have been decisive for the *decline in adolescent alcohol use over time* (see Raninen, 2018). Many changes have occurred in adolescent living conditions and life at the same time as drinking has declined, which makes it harder to arrive at decisive conclusions. Research is still needed to verify causal relations. In order to understand why that young people today drink less than young people did 10 or 15 years ago, we should look at issues such as youth living conditions and habits, time use, leisure activities, family backgrounds and conditions, interaction with parents and peers, and alcohol use patterns. The explanations are complex and should make use of quantitative and qualitative research both at national and local levels (Tigerstedt, 2017). Pape et al. (2018) have reviewed the most recent literature on the matter and conclude that it is most likely a question of many factors working at the same time.

'When youth drinking was on the rise we thought we knew why but when it is declining we struggle to find answers.' (Tigerstedt, 2016, transl. YOF).

Aveek Bhattacharya (2016) (Institute of Alcohol Studies, London) has listed *seven explanations* or explanation themes that have figured in both scientific and popular discussions and literature as contributing to the decline in youth drinking. These explanations are often used as a point of departure in studies exploring reasons for the decline in adolescent drinking (Raitasalo et al., 2018).

The seven points presented by Bhattacharya are: 1) better legal enforcement; 2) rise of new technology; 3) changing social norms; 4) happier and more conscientious children; 5) better parenting; 6) demographic shifts; and 7) lower affordability and economic confidence. This chapter uses the seven points to frame the relevant Nordic research for trying to understand the reasons for the decline. We will survey research on risk and protective factors for drinking, and will also present the few studies that have found some explanations for the decline in youth drinking over time. Some additional perspectives in addition to those listed by Bhattacharya are also explored.

7.1 1. Better legal enforcement of age limits? The relevance of alcohol policy and its practical enactment

Could it be that drinking has declined among adolescents as a result of more stringency in alcohol policies aimed at adolescents and their enactment? The argument here is that the legal system, such as the police and the government have increased or improved their actions. This mainly implies that there is better enforcing of the legal age of buying alcohol through for example trained personnel in shops or in monopoly stores.

It is likely that *official enforcement only explains a small proportion of the decline*. Relatively few underage drinkers buy their own alcohol; they are more likely to be supplied by parents or friends (Raitasalo et al., 2018; Kraus et al., 2016; Bat-tacharya, 2016).

*Enforcement of age limit legislation nevertheless may have had an effect on young people's drinking even though it is hard to assess how important this has been for the actual decline in adolescent drinking.*³¹

During the period of the decline in adolescent drinking there have been some attempts to enforce the legal age for purchasing alcohol in the Nordic countries. It is possible that this has had a certain influence on underage drinking, but the available research evidence is limited (Karlsson, 2016; Rehnman et al., 2005),³² According to the Finnish NTTT study of 2017, the number of minors who reported buying alcoholic beverages from *Alko* or a grocery store decreased significantly in 1989–2017. This has been seen as a success in making alcohol legislation stricter.³³ On the other hand, there was a marked increase in the amount of alcohol bought via friends or acquaintances (Kinnunen et al., 2017).

³¹ The very existence of age limits (and the level of the limit) may reduce drinking in many ways. The deterrent effect of it being illegal to buy alcohol is a structure that adolescent alcohol use is framed by (cf. Kinnunen et al., 2017). Qualitative studies also show that parents often refer to age limits when explaining to their children why they forbid drinking of alcohol (Henriksen, 2012). An older study by Møller (2002) concerned the introduction of alcopops (1997) and effects of subsequent restrictive legislation in Denmark (1998) along with a low-key campaign addressing shopkeepers and the public concern for young people's drinking. The study indicated a reduction in drinking among youth after sales to those under 15 were forbidden and legislation was made stricter. The pattern of the results suggests that the reduction may have been attributable at least as much to the public discussion around alcopops and the new minimum age law, and the effects of these on parents, as to the minimum age law itself (cf. Room, 2001).

³² There is evidence of the effectiveness of some local campaigns in the Nordics that target only some shops or some areas (Rehnman et al., 2005).

³³ The Finnish alcohol monopoly *Alko* made one of the first attempts to curb alcohol sales to minors when they in the early 2000s began to check the ID's on anyone looking younger than 25 and refusing to sell unless proper legitimation was presented. This conduct was adopted by the Finnish Grocery Trade Association in October 2013; the age limit for an ID check was set at 30 years (Karlsson, 2016).

A Government resolution on alcohol policy was also announced in 2003 followed by a national Alcohol Programme, which sought to considerably reduce the burden caused by alcohol on children and families, reduce the risky use of alcohol, and to create a downward trend in the overall consumption of alcoholic beverages. However, concrete action was not taken until 2006, when the government decided that the retail sales of alcohol should not commence earlier than gam (April 2007), bulk discounts for alcoholic beverages were prohibited, and advertising on TV and cinemas was restricted (January 2008). The advertising restriction in particular was directed at young people. The legislation on alcohol offences was also amended in 2009 (641/2009–643/2009), enabling more effective interventions in cases of, for example, possession of alcohol by underage persons and alcohol marketing to underage persons (Lintonen et al., 2013; Karlsson, 2016).

Between 2007/8 and 2015, Finland adopted a more restrictive alcohol policy in order to counteract the increase in alcohol-related harms (especially among adults) in the aftermath of the considerable tax reduction in 2004. Finland raised

Finnish researchers have expressed concerns about the reform of Finnish alcohol legislation that entered into force in 2018, fearing that it might jeopardise the downward trend in drinking. The reform brought alcopops and stronger beer (max. 5.5%) into regular stores, which researchers believe may encourage young people to drink more and stronger drinks than before (Kinnunen et al., 2017).

Furthermore, it is not always only the rule itself but *how the rule is enforced* that is decisive for the impact on adolescent drinking and also for the possible unintended consequences.

Legal enforcement of underage drinking is also performed through *police or security guard control³⁴ of environments or public spaces where adolescents may drink*, such as shopping malls or parks. Scholars suggest that young people in Finland and in other parts of Europe as well are being subjected to ever tighter social control in public spaces (Saarikkomäki, 2017; Korander, 2014). There has been a notable trend towards increased police control, even at a time when delinquency rates and alcohol use among young people have remained stable or decreased (Kivivuori et al., 2013; Salmi, 2012; Raitasalo et al., 2016). Private security guards are also more prevalent than previously; their numbers have steadily risen during the last 10–15 years. While they do not have the same rights as the police to for example search young people's belongings for alcohol, security guards *may act as deterrents* or control agents. They clearly impact the ways and places in which young people hang out (Saarikkomäki, 2017). However, it is *unclear to what extent this lessens drinking and to what degree drinking just moves*

alcohol taxes for the first time during its EU membership in January 2008, and four additional, yet moderate alcohol tax increases were made in 2009–2014 (Karlsson, 2016).

In January 2015, the grocery trade abolished restrictions on opening hours. This affected the availability of alcohol, as the sales hours substantially extended in the end.

In 2017, the Alcohol Act (100/2017) was reformed, and entered into force partly in January 2018 and partly in March 2018. Among other things, the reform allows the selling of strong beers (5.5%) and so-called alcopops in grocery stores, a reform that youth researchers opposed. The reform also enables longer serving of alcohol in bars (until 4am) given they notify the authorities, enables alcoholic beverages to be bought home from bars; enables one person to buy drinks in bars also for others than him/herself. The alcohol monopoly stores may now be open until 9pm on weekdays. Researchers have feared that the liberalising of alcohol sales may affect young people's drinking particularly through the sales of stronger beers in grocery stores but also indirectly through the influence of a probable increase in parental and other adult drinking (Kinnunen, 2017).

³⁴ More informal control may also come in the form of so-called parental patrols in Iceland: parents are encouraged to patrol the streets to see why young people who are out late are not at home. This is thought to be an important part of the preventive work in Iceland, where it is paired with many other forms of control and support of young people (see more in chapter 4.3.1 on Iceland). However, the programme itself has not been externally evaluated, so it is uncertain which parts are the effective ones or whether it is a question of many factors working together.

somewhere else (Korander & Vanhala, 2003; Korander, 2014). Some studies indicate that adolescent drinking and particularly binge-drinking increasingly take place in home environments as opposed to adolescents hanging out in public spaces (Ander et al., 2015).

7.1.1 Availability of alcohol

Availability of alcohol, i.e. how easy it is to obtain alcohol, is an important factor limiting adolescent drinking (Nordfjærn et al., 2013).³⁵ According to Kraus et al. (2015), young people in Europe find that it is more difficult to obtain alcohol than did young people 10–15 years ago. Has this been significant for the decline in alcohol use? The answer seems to be yes. Indeed, Raitasalo et al. (2018) used the variables available in ESPAD data to map which factors could have contributed to decreased adolescent drinking in Finland over time. Three factors remained significant after adjustments: 1) obtaining alcohol has become more difficult; 2) parents know better than before where their children spend their Friday nights; and 3) the risk of adolescents drinking when going out with friends has decreased.

The attitudes and actions of parents should also matter, as research indicates that parents have become stricter than before. This is discussed below in section 7.5.

7.1.2 Short summary

1. Better legal enforcement?

- Stricter enforcement of age limits on buying alcohol in shops and supermarkets may have reduced adolescent drinking.
- Enforcing age limits may impact drinking levels, but there are few studies on this. The impact on the decline in adolescent drinking of stricter enforcement of age limits is likely limited. Young people rarely buy alcohol from shops and supermarkets, obtaining it mainly from peers or other people in their environments.
- There is now stricter control of public spaces such as shopping malls and parks where young people may hang out and drink. This may have had an impact on drinking but some studies suggest that drinking has moved elsewhere as a result.
- Other *forms of control* than legal enforcement are likely to be more central in explaining the decline in adolescent drinking.

³⁵ A Norwegian study on social recognition and deviant behaviour among rural Norwegian adolescents proposed that research should test whether substance availability relates to the differences in substance use between rural and urban living environments (Nordfjærn et al., 2013).

- Social control plays a part in reducing drinking.
- Young people perceive that it is now **harder to get hold of alcohol**. Research shows this has also reduced drinking. *Reducing availability is thus important for the control of adolescent drinking.*
- Studies show that **parental control** has been significant in the reduction of adolescent drinking.
- Parents today seem to have stricter attitudes toward drinking.
- Parental control will reduce, at least for some part, when children grow older and reach the legal age for drinking.
- Enforcing age limits may limit adolescent consumption of alcohol, but the effect is likely small. Adolescents often receive their alcohol from other sources than the official store. Enforcing age limits should be paired with other efforts limiting availability and making alcohol less attractive or less socially accepted.
- (see more in section 7.5).

7.2 2. Rise of new technology?

Bhattacharya (2016) takes up the argument that new technology such as online gaming and social networks divert children from drinking with alternative means of socialisation.

The evidence which suggests that heavier internet use reduces drinking is both limited and conflicting (see also Busch et al., 2013). Some evidence suggests that the reverse may be true. New technology also enables drinking (and for example cannabis use) by forming social networks.

A recent *literature review* by Pape et al. (2018) indeed *found no evidence* in support of the widespread assumption that the digital revolution has had an impact on the decline in adolescent drinking (see also Larm et al., 2018b).

The Nordic literature used for this report includes only a few studies that analyse ICT use/internet use/computer use. While it is seen as a factor that might contribute to alcohol use, it is usually not significantly connected to the drinking risk. The studies seem to support the conflicting view of digital technologies limiting or enabling drinking. There are many factors that in connection with ICT use might either heighten or reduce the risk for drinking. A Finnish study by Näsi et al. (2013) indicates that the more emotional loneliness an adolescent feels, the less heavy drinking experiences she/he has. The factors also had a connection to ICT use. A recent cross-sectional self-report study among 851 Norwegian middle and high school students indicated that a greater amount of time spent

on social media was associated with a greater likelihood of episodic heavy drinking among adolescents even after adjusting for school grade, impulsivity, sensation seeking, symptoms of depression, and peer relationship problems (Brunborg et al., 2017).

A range of factors on digital media use may be important in explaining the possible role of digital media in drinking. Such factors are at least loneliness and mental health but also the type of digital tool that is used and the type(s) of social media used and what they are used for (Larm et al., 2018b).

7.2.1 Short summary

2. The digital revolution?

- It has been claimed that young people spend more time online or playing computer games and thus have less time for drinking.
- Some studies support this claim. Others do not.
- A fresh literature review by Pape et al. (2018) found no support for the digital revolution having affected the decline.
- The area needs more research. Important factors that should be included are for example how the social media is used and what for, the type of social media, and loneliness and mental health.

7.3 3 Changing social norms?

The third explanation discussed by Battacharya (2016) refers to changing social norms. Some studies imply that norms of youth drinking have changed, making it less acceptable than before to drink (or drink heavily) in adolescence.³⁶

Several Nordic qualitative studies see changes in drinking/youth culture that may influence drinking behaviour (Demant & Törrönen, 2011). Lähteenmaa (2007) maintains that negative views of alcohol (*alkoholikielteisyys*) are becoming more common among adolescents; drunkenness is not viewed as positively as earlier. Raitasalo and Simonen (2011) have suggested that one major factor behind the growth of abstention among Finnish young people, especially until the ages of 15 and 16, is a change of values in today's youth culture.³⁷

³⁶ Battacharya (2016) notes that the change in norms is hardly a backlash on the individual level against the drinking of one's own family (which is sometimes claimed), as there is solid evidence that youth from families with heavy drinking also drink more themselves. Young people with parents who drink and who drink heavily indeed drink more in the Nordics (Pape, Rossow, & Størvoll, 2015; Raitasalo & Holmila, 2014).

³⁷ While there are also converse tendencies in young adults' drinking habits, it seems that binge-drinking and inebriation have taken on an increasingly positive meaning especially for young women closer to the age of 18 (Raitasalo & Simonen, 2011).

There appear to be some differences between the Nordic countries regarding this issue. In Denmark, drinking alcohol and drinking to intoxication remain an important part of youth culture and the maturing process (Demant & Krarup, 2013). However, adolescent drinking has also declined in Denmark, even if drinking is still very common among young Danes.

While adolescent drinking has changed, there have also been many other changes in young people's lives and life conditions. Young people overall seem to take school more seriously, to be less delinquent, and also to experience more stress and anxiousness (Bakken, 2017; Hegna, Ødegård, & Strandbu, 2013; see also section 7.4 in this report). However, it is unclear which of these changes are behind the decline in youth drinking and whether there are some factors that could explain both declining youth drinking and, for example, declining delinquency simultaneously?

Pennay et al. (2018) have conducted a review on the most recent literature on the decline in adolescent drinking. The researchers argue that for understanding the decline in adolescent drinking, research needs to employ cross-cultural comparison and to be situated within a historical and generational perspective to understand declines in adolescent drinking in the context of a broader shift in adolescent behaviours.

7.3.1 Short summary

3. Changing social norms concerning alcohol use?

- Some qualitative studies suggest that changes in drinking habits are intertwined with **changes in youth culture**.
- Drinking may not be as accepted in today's youth culture as previously.
- The fact that adolescents on the whole drink less may also give those who do drink a position that is different from that given before.
- There seem to be some differences between the Nordic countries regarding this issue. In Denmark, alcohol still remains an important part of youth culture and maturing, and is still much used among young people. Drinking has nevertheless also declined in Denmark.

7.4 4. Happier and more conscientious children?

Bhattacharya (2016) finds some evidence that subjective well-being and academic achievement – both of which are associated with less drinking – have increased in recent years, though the evidence is not conclusive.

Some Nordic evidence suggests that adolescents today are conscientious and relatively happy, but as will be discussed in section 7.4.1 below, the findings also include contradictions. The school health studies in Finland and the Ung Data studies in Norway give quite a similar picture of the situation: school satisfaction has risen, and young people want to do better at school than previously. Young people are overall happy. The Norwegian study highlights the high percentage of youth who believe they will reach higher education after compulsory school (Luopa et al., 2014; Bakken, 2017).

7.4.1 The question of mental health

There is also a trend in adolescent life which gives cause for concern: young people's mental health, especially in terms of tiredness and anxiety, and an experienced pressure to perform.

Mental health problems such as anxiety, stress, and nervousness have grown more common among young people in many Nordic countries and especially among girls. Fairly recent numbers are available from Sweden (Folkhälsomyndigheten, 2017), Norway (Abebe et al., 2016), and Finland (Kouluterveyskysely, 2017). Norwegian scholars talk about a dead serious generation (*sygt seriøs generation*) that takes school more seriously, is less delinquent, but also experiences more stress and anxiety (Hegna, Ødegård, & Strandbu, 2013; Hegna et al., 2013; Øia et al., 2012; see also Bakken, 2017; section 7.4 in this report). This development is occurring internationally (Curran & Hill, 2017).

The development has taken place roughly during the same years as alcohol use has declined, which has puzzled scholars. Studies have traditionally tended to find better mental health among non-drinking adolescents (Pedersen & Kolstad, 2000; Torikka et al., 2001).³⁸

A recent Swedish school study by CAN for the first time included a question about mental health, and young people who said that they had felt down or depressed many times during a week used alcohol more often (Englund, 2018). In their study based on Finnish school surveys in 2000–2011, Torikka et al. (2017) established that while alcohol use had generally decreased, the likelihoods of frequent drinking and drunkenness had increased among adolescents who were depressed and had unemployed parents with low levels of education.

It remains to be seen *whether the increased depressive and other symptoms in adolescence will impact the drinking habits of future adults*. Some studies indeed

³⁸ However, some studies have also found worse mental health among abstainers (Skogen et al., 2009).

find a connection between mental health problems in adolescence and drinking in adulthood.

Pape & Norström (2016) followed a Norwegian sample of 2000 persons from teenagers to adulthood between 1992 and 2005. Depressive symptoms did not necessarily lead to drinking in teenage years, but when the respondents reached young adulthood, there was a slight connection between mental health and drinking. Similarly, a study by Virtanen et al. (2015) about a Swedish cohort that was surveyed between the ages 16 and 42 showed an association between internalised mental health problems (depressiveness and anxiousness) in adolescence and lifelong heavy drinking. The study also confirmed a strong association between externalised behaviour (truancy and vandalism) and heavy drinking, indicating a need for preventive measures in this group. The analyses nevertheless demonstrated that most teenagers with mental health problems continue along a reasonable drinking trajectory.

7.4.2 Short summary

4. Happier and more conscientious children

- Subjective well-being, well-being at school, and a focus on school have all become more common among young people, according to studies (mainly with 15–16-year-olds). Whether these developments have contributed to reducing drinking is not clear. More studies are needed.
- There is also a trend which contrasts the overall happiness: more young people report symptoms of strained mental health. Young people at large value school and want to do well, they drink less and smoke less, but experience stress, anxiety, and disrupted sleep. It has puzzled scholars that the increase in self-reported symptoms of strained mental health has occurred simultaneously with the trend of less drinking.
- It remains to be seen whether increasingly strained mental health will have an impact on the drinking habits of future adults.

7.5 5. Better parenting (and a smaller generation gap)?

Bhattacharya singles out a few parental characteristics that have consistently been associated with underage drinking: a) modelling; b) approval; c) monitoring; d) warmth and openness of relationships; and e) family structure.³⁹

³⁹ Certain types of family backgrounds have been studied in detail with respect to alcohol-related harm or drinking among the children. Some more atypical family backgrounds seem to include a higher risk of drinking. Some studies have explored the elevated drinking risk among internationally adopted adolescents, but mental health problems have explained a large part of the difference (Askeland et al., 2017). Drinking problems in the biological family also seem to

Bhattacharya stresses that in most cases not much can be said about the causal relationship of these factors with the actual *decline* in drinking (ibid.).

Pape et al. (2018) contend that *a decline in parenting practices known to be conducive to underage drinking has occurred in several countries*, but few studies have examined whether these changes have actually contributed to less alcohol use by youth. This chapter tackles Nordic research on the above themes of a–e in terms of their relevance for the decline in adolescent drinking.

7.5.1 Warmer relationships?

The relationship between young people and their parents has undergone changes, and it has been asked if the change might impact whether and how young people drink. On the basis of repeated waves of the Ung i Oslo studies in 1996, 2006, and 2012, researchers claim ‘a disappearing generational gap’ (Øia & Vestel, 2014)⁴⁰. The argument is that there has been a shift in the relationships between adolescents and their parents which were typically antagonistic or conflicting in the decades after the Second World War. There is now room for a *positive and dialogue-based relationship between parents and their children*. The authors cite empirical evidence of changes in the young people’s views of their parents and families as significant actors in their lives, along with other socialising institutions such as schools. This gives the parents more influence over their children’s lives. The possibility of both *communication and control* between generations is *further enhanced by the new digital technologies*. Whether or in which ways these changes have contributed to less drinking among adolescents, is however not entirely clear.

The right kind of (warm) interaction between parents and adolescents seems to connect to a lower risk for children’s use of alcohol and drugs some studies find (Raitasalo, 2003). Family conflicts may conversely increase the risk for adolescent substance use, maintains an Icelandic study (Kristjanson et al., 2009). An authoritarian or a neglectful parenting style has also been connected with heavy drinking (Stafström, 2014).⁴¹ However, the relationship for example between parental trust and alcohol use is a complex one and dependent on the context and

be a risk factor for drinking among adolescents taken into care (von Borczyskowski et al., 2013). These studies highlight the importance of support to adopting families and with children placed out of their homes. Whether or not these and other factors relating to family structure have to do with declining drinking rates among young people appears not to have been studied in the Nordic countries.

⁴⁰ Generationskløfta som forsvant?, translation by YOF.

⁴¹ The other factors were having parents consenting to alcohol use and having parents who both have a university degree, and having been provided alcohol by one’s parents. These factors being present in both grades 9 and 11 leads to

other factors; Trusting may in certain circumstances increase alcohol use (Demant & Ravn, 2013; Nordfjærn et al., (2013).

Parents seem to be aware of this. A Finnish study has illustrated something of a conflict here: even though they often wish to parent in ways that could be described as dialogic, discussing, and democratic, parents emphasise that they have the final responsibility for their children and do not wish to be 'parent friends' (*kaverivanhempi*) to their children (Pirskanen et al., 2016).

Parental monitoring seems to play a part in this equation. Having a secure attachment to parents *along* with high parental monitoring seems to have a protective effect in the presence of risk factors. For example, a Swedish study has found that while the effects of relations with parents were modified by peer activity frequencies, high levels of parental monitoring were significantly associated with lower frequencies of alcohol use (Bergh et al., 2011). On their own, high levels of peer activity are associated with higher frequencies of alcohol use (Danielsson et al., 2011).

The Icelandic ways of prevention in alcohol programmes indeed use parental involvement as a means of curbing adolescent drinking. Parents may for example patrol neighbourhoods to talk to young people who are outside late at night and urge them to go home (Kristjanson et al., 2016).

One can assume that the effect of parental control of adolescent drinking diminishes radically when the young people reach the legal age of drinking. Indeed, parents often say they refer to the legal age when they justify to their teens and themselves why their minors should not drink.

It is clear that parenting impacts adolescent drinking. Pape et al. (2018) conclude in their literature review that *there should be more studies concerning to what degree and how parenting styles or practices have impacted the decline in adolescent drinking and the related risks*. The research should address a global, comparative, and a Nordic context (Pape et al., 2018; Pennay et al., 2018).

7.5.2 Parental attitudes and example

Parental attitudes toward drinking are associated with teenagers' drinking behaviour, shaping what the teenagers may perceive as 'normal' drinking. Parents' attitudes toward drinking alcohol are reflected in how they talk about alcohol, in

the conclusion that parenting styles as well as parental attitudes and behaviours are important throughout the secondary school years.

their choices about their own drinking, and whether or not to limit their children's drinking (Raitasalo & Holmila, 2014; Elmeland & Kolind, 2012; Pettersson et al., 2009).

Parents have different attitudes on alcohol use in adolescence. A Norwegian qualitative study has identified three important ways of parent talk about adolescent drinking at parent meetings. In a traditional discourse, the age of the Christian confirmation (15) legitimates a sip of alcohol. A second discourse takes place in modern society where there is fluidity about the right and the wrong in drinking matters, too, and the third discourse focuses on the legal age limit for drinking (Henriksen, 2012). A Swedish study has indicated that fathers are more likely than mothers to have a non-restrictive attitude towards their offspring's drinking (Pettersson et al., 2009).⁴²

Some parents decide to provide their adolescents with alcohol. Parents may argue that as the adolescents will drink 'anyway', it is better that they drink at home than in the streets or that they are not tempted to accept alcohol from strangers (Rehnström, 2018). A Swedish thesis in social work has indeed found that parents often refer to their offspring's 'maturity' in deciding whether to give alcohol to their underage children (Englund & Lindberg 2011).

However, the *assumptions of lesser harm are for the most part disputed by research.* Parents' providing alcohol to their offspring may be linked to their adolescents' drinking and binge-drinking the same beverage. A Swedish study further found no evidence for any substitution effects, i.e. that adolescents increased the consumption of another alcoholic beverage when the parents were unwilling to provide a certain beverage. Thus, the *unwillingness of parents to provide alcohol may reduce adolescent drinking a great deal* (Lundborg, 2007).

Studies often indicate that *young people who drink with their parents (DWP) drink more than young people who do not.* Pape and Bye (2017) however found that *the picture might be more complicated.* They asked 15- and 16-year-olds who they had had their last drink with. The results show a clear association between having one's last drinking episode with a father or mother and drinking less. Still, drinking with one's parent(s) more than a couple times in the past year was associated with a strongly increased risk of severe drunkenness and high consumption. Indeed, the higher the frequency of DWP, the higher the prevalence of

⁴² Fathers, single parents, and parents with older children were more likely to have non-restrictive attitudes towards adolescents and alcohol than were mothers, parents living in a household with more than one adult, and parents with younger children. Factors such as the parents' age, employment status, and the number of children in the household were not associated with either parental attitudes or behaviour in this study.

high-risk drinking. Parental drunkenness, permissive alcohol-related parenting, and indicators of suboptimal parenting also more generally correlated with DWP. Drinking with parents is related to adolescent high-risk drinking, yet *the association is in part attributable to parents' drinking and the parenting style* the study indicates. The research by Pape and Bye might also give insight into how *parenting styles can be linked to low alcohol consumption among teenagers*.

Not all parents manage to enact their views and rules. A Finnish interview study found that the drinking habits of the parents themselves had a great impact on how they viewed their abilities to raise children in alcohol-related issues. When the parents had alcohol problems, they often expressed concern or ambivalence about the example they would like to set and what their actual drinking habits were like. Alcohol questions can according to the same study be characterised as *a grey zone of parenting*, sometimes viewed very strictly but also including listening to the children (Pirskanen et al., 2016).

Parents today tend on the whole to have *more restrictive attitudes* toward drinking (Larm, Livingston et al., 2018; Raitasalo, Simonen, Tigerstedt, Mäkelä, et al., 2018), but it is not true of all parents, and importantly, *not all parents who want to restrict their children's drinking have the ability or resources to do so* (Pirskanen et al., 2016).

Children of parents who drink a lot tend to drink a lot themselves. An extensive literature shows that *children whose parents suffer from an alcohol use disorder or drink too much are at an increased risk for various health and social problems, including substance use problems, mental health problems, and unemployment in the future.* Problems such as hazardous drinking are also more prevalent in adolescence (Jääskeläinen et al., 2016; Bratberg et al., 2016; Karlsson et al., 2019). Support given to parents with alcohol problems is crucial not only for the parent(s), as the children also suffer from alcohol problems in the family. Support is important also for the actual and future well-being of the children and their future drinking habits (Elgan & Leifman 2013).⁴³

⁴³ For example, an online survey targeted to 1000 Swedish 16–19-year-olds randomly selected from a web panel used the CAST-6 scale to assess whether the participants perceived their parents' alcohol consumption as problematic; 20.1% of them did. Further, 44% reported thinking that someone close to them drank too much alcohol, and 9.6% said that this had hurt them or caused them problems (Elgan & Leifman, 2013). The question of problematic alcohol use where no clinical diagnosis is set appears to be more complex than often assumed.

7.5.3 Parents restricting drinking

Parents' restrictions on their children's drinking have a strong impact on whether or how much the children will drink. Young people themselves might believe parental control has no effect and that drinking habits within reasonable limits can best be developed through trial and error. A survey study by Järvinen and Østergaard (2009), however, reveals a strong relationship between parents' attitudes and rules and their children's binge-drinking. The more lenient the parents' attitudes and rules are, the more the children tend to binge-drink.⁴⁴

Based on underage adolescents' self-reports, it is safe to argue that *Nordic parents today are more restrictive in allowing underage young people to drink* (CAN, 2013; Leifman, 2017; Kraus et al., 2016).⁴⁵

In a comparison of the years 2004 and 2012, Larm et al. (2018)⁴⁶ showed that *also the parents of those young people who drank a lot had become more restrictive* by 2012.. Non-drinkers were distinguished from drinkers in both 2004 and 2012 by elevated parental supervision, less school truancy, lower rates of cannabis use and use of other illicit drugs, less daily smoking, and lower scores on anti-social behaviour. Non-drinkers did however have more problems making new friends. The main difference between the years was that parents had become more restrictive during the study period.

The parents' restrictive views also seem to translate into action. The available evidence indicates that this *has had an effect on the decline in young people's drinking*. Raitasalo et al. (2018) has verified that the decline in alcohol use and in heavy episodic drinking among underage youth in Finland is associated with at least three factors: 1) obtaining alcohol has become more difficult; 2) parents know better than before where their children spend their Friday nights; and 3) the risk of drinking attached to going out with friends has decreased.

⁴⁴ Järvinen and Østergaard (2009) examined the relationship between Danish adolescents' drinking habits and their parents' upbringing ideals and alcohol rules. The study was based on a comparison of three different data sets: a survey of 2000 Danish young people born in 1989, a survey with the parents of these young people, and two waves of focus group interviews (28 in all) with adolescents aged 14 to 16. The study demonstrates that there is a sharp contrast between the views of the adolescents and the findings from the two surveys.

⁴⁵ Indeed, the Norwegian ESPAD data of 2015 included inquiries about home rules on alcohol. Half of the respondents said that they had rules forbidding the use of alcohol before the age of 18 years, while 14% of the respondents said that they were allowed to drink a little but not become intoxicated (Bye & Skretting, 2017.)

⁴⁶ Using the Swedish Survey of Adolescent Life in Vestmanland, including a total of 2872 students in 2004 and 2045 students in 2012.

The ESPAD data at large shows that young people find it increasingly hard to obtain alcohol compared to previous study years (Kraus et al., 2016). As young people primarily obtain their alcohol from sources other than stores (usually friends), the parents' restrictive role might also impact a decline in drinking in other countries, but this should be investigated further.

7.5.4 Short summary

5. Better parents and a smaller generation gap?

- The way that parents interact with their children has changed during the same period that drinking has declined. Parents seem to have better contact with their children and to communicate with them in a more meaningful dialogue. The possibility of communication (and control) between generations is further enhanced by the new digital technologies. Norwegian researchers call this development the *disappearing generation gap*.
- There are many question marks regarding how and to what degree these developments have impacted the drinking habits of adolescents. Researchers do agree that the impact of changed parenting practices on declined adolescent drinking needs to be investigated further.
- Parents have a great influence on how their offspring's drinking habits evolve. Children of parents who drink a lot tend to drink a lot themselves. A parent's diagnosed drinking problem is a strong risk factor for hazardous adolescent drinking or problems in many areas in adulthood.
- Research also shows that the parents' own drinking habits – such as their possible drinking problems and attitudes – also have a great impact.
- Parents today have more restrictive attitudes toward their children's drinking than previously.
- Increased parental control of children's drinking (knowing where the children are and what they do) has a statistically proven impact on the decline of adolescent drinking in Finland.
- It is not clear what it is in parenting, besides control, that has been significant for the decline in adolescent drinking over time. This area calls for research attention.
- We can assume that the effect of parental control of adolescent drinking diminishes radically when the young people reach the legal age of drinking.

7.1 6. Demographic shifts?

Nordic countries have become more culturally divergent. Some have argued that this may have impacted adolescent drinking so that there are now fewer

adolescent who drink, but the extent of the possible impact is not clear. The drinking habits of young people with different ethnic backgrounds do differ, and there is an increase in the numbers of ethnic minority youth. However, the impact of this on the increased rates of non-drinkers is probably not very strong if it exists at all (Bhattacharya, 2016; Svensson & Andersson, 2016).

Still, people are influenced by the drinking habits of their countries of origin (Skogen et al., 2018; Hafstad et al., 2015). *Non-drinking adolescents in Norway, for example, are often from non-western immigrant backgrounds.*⁴⁷ This association seems to be particularly strong among immigrant girls. Muslims are often non-drinkers, and religion plays an important role in the non-drinkers' lives (see also Degni et al., 2010). According to a Norwegian study, the traditional temperance movement that has been strong in Norway does not seem to play a part in this picture:

Historically, alcohol abstainers in Norway have been recruited from the non-secularized and tradition-bound segments of society, and they have represented what has been labelled a 'morally religious lifestyle'. There is much to indicate that we still find such patterns - but now in totally new groups, namely the new non-western immigrants (Pedersen & Kolstad, 2000, citation from abstract.).

To a degree, adolescent drinking among minority youth tends to reflect or be influenced by a culture from the country of origin. Some adolescents have backgrounds in cultures where the drinking habits resemble those of the Nordic countries, whereas others have a background in very different alcohol cultures. Skogen et al. (2018) indeed found no differences between the majority Norwegian population and youth with roots in the EU/EEA or the US.⁴⁸ Non-EU/EEA adolescents, however, were less likely to have ever tried alcohol. Young second-generation Asians are less likely to drink than Norwegian youth (Hafstad et al., 2015), and a Finnish study found that substance use (including alcohol) was more common among Estonian-speaking adolescents in the Helsinki area (Malin et al., 2014).

⁴⁷ Bivariate analyses revealed that non-drinkers often came from lower socioeconomic strata and had family backgrounds with low levels of cultural capital. Logistic regression analyses suitable for clustered data with a hierarchical structure revealed however that these associations disappeared when ethnicity was controlled for. 'Living area in Oslo' had a significant impact on the probability of being an abstainer, and there was an independent effect of the school attended. Furthermore, non-drinkers often came from non-western immigrant backgrounds.

⁴⁸ However, there were some differences on smoking, snus, and trying illicit drugs, which the majority Norwegian adolescents did less of.

In many cases the influence of ethnic minority cultures seems to translate into less drinking. Amundsen et al. (2005) found drinking to be less common among immigrant students who had resided in Norway for a short while and were attending schools with a large proportion of Muslim students. Also, the larger the proportion of Muslim students in the school, the larger the proportion of abstainers with a Norwegian background. Also, those who drank did so less frequently and were less frequently intoxicated. Researchers talk of a *bi-directional acculturation process*. *The majority population tends to adapt to the behaviours of the immigrant population, who in turn to a varying degree make an effort to adapt to the behaviour of the majority population.*

In Finland, too, alcohol use is less common among adolescents with non-Finnish backgrounds (Järvinen-Tassopoulos & Raitasalo, 2017). However, the use of other substances and tobacco seems to be more common among adolescents with foreign backgrounds than in the majority population. This is a group that also experiences more ill health, stress, and somatic symptoms (Wikström et al., 2017; Matikka et al., 2014).

As this chapter also shows, there are some *differences between the Nordic countries when it comes to drinking among ethnic minority youth*. One reason may be that minorities are also ethnically different in the different Nordic countries. The number of immigrants may also be a factor given that Finland receives fewer immigrants than for example Norway, Sweden, and Denmark. The success or failure of integration policies in ensuring the well-being of immigrants and asylum seekers may well have a bearing not only on the formation of adolescents' lives but also on the drinking habits of young people from minority cultures (cf., Karlsdóttir et al., 2018).

Nordic countries are now more culturally divergent also when it comes to drinking cultures. This is something to bear in mind for example in preventive work aimed at young people. However, whether the divergency has been a reason for the decline in drinking is not clear. For example, a *Swedish study has found that the marked increase in non-drinkers during the last 15 years is not associated with changes in the demographic composition among Swedish youth* (Svensson & Andersson, 2016).⁴⁹ More studies should be conducted in the other Nordic countries. regarding the connection to the decline in drinking

⁴⁹ Descriptive results revealed a change in the demography of Swedish 15- to 16-year-olds. In the early 1990s 1% of Swedish 15- to 16-year-olds were born in a Middle East country, this proportion increased to 6% in 2012. Furthermore, those born in the rest of the world (non-European or non-Nordic countries) increased from 1% to almost 4%. Similarly, the trend of non-drinkers increased from about 20% to more than 40% among Swedish 15- to 16-year-olds during the

7.1.1 Short summary

6. Influence of demographic shifts/young people belonging to minority cultures?

- Adolescents with a background in certain minority cultures drink less than young people in Nordic majority cultures.
- The decline in drinking among underage young people may have something to do with this, but *the impact is probably small if it exists at all* and may also be different in different Nordic countries.
- On the whole adolescents from minority cultures seem to drink less than adolescents from the majority cultures.
- There are large differences in drinking habits depending on the culture of origin.
- There is also evidence that young people belonging to minorities start to take on majority culture behaviours.
- There are differences between the Nordic countries concerning the demographic backgrounds of minority young people, and thus their influence on the decline in alcohol use may differ as well.
- Integration policies in ensuring the well-being of immigrants and asylum seekers may well feature in the formation of the lives and possibly also the drinking habits of adolescents.

7.2 7. Lower affordability and less economic confidence?

The price of alcohol matters a great deal when we try to explain trends in adult drinking (Room, 2002). Increased taxes for example have reduced drinking among Finnish adults during the latter part of the 2010s (Karlsson, 2016; Lintonen et al., 2013). Bhattacharya (2016) claims that economic factors have had a lowering effect on youth drinking in Britain; lower affordability and less economic confidence are the result of tax increases, the recession, and rising tuition fees of university education. Also, alcohol prices rose faster than wages from 2008 to 2014 in Britain. All this may have entailed less drinking among adolescents. What can we say about the effects of economic factors on adolescent drinking in the Nordic countries?

same period. However, a more thorough analysis using ARIMA modelling revealed no significant association between rates of region of origin and non-drinking.' (Svensson & Andréasson, 2016; citation from abstract)

Economic factors also play a part in young people's drinking in the Nordic countries, although the mechanisms seem to be slightly different from those in the adult population. There have indeed been some legislative shifts that have for example lowered and raised alcohol prices, but *their effects on adolescents have not been equal to the effects in the adult population*. Lintonen et al. (2013) analysed the effects of alcohol policy changes in 1981–2011 on adolescent drinking in Finland. They conclude that adolescent drinking has not followed the trends seen in the adult population. While the total consumption of the adult population has increased conspicuously in association with EU-related developments, this has not happened among adolescents.⁵⁰ With young people, what appears to have mattered more are other mechanisms influencing availability. Not all factors that influence adult drinking influence young people's drinking, or at least the influences may have different mechanisms.

The relationship between money and drinking obviously plays a role among young people. Studies show that youth in more affluent parts of cities and with more affluent family backgrounds drink more, explained by more economic possibilities and availability of alcohol (Statens Institut for Folkesundhed, 2018a; Berggren et al., 2016; Pedersen et al., 2015; see also section 6.2 in this report).

Disposable income has been a significant predictor of adolescent drinking in the past 30 years. However, its role has decreased at least in Finland in the recent years, even if the role is still not unimportant (Lintonen & Nevalainen, 2017).

Young people's drinking used to follow the total consumption level of alcohol in the population, but Nordic adolescents started drinking at a time when drinking in the adult population was still increasing (Svensson, 2013; Raninen, 2015). Thus, explanations for the decline in adolescent drinking are in many parts different from those for the adult population. Availability may have reduced, but this is tied not only to economic factors. Adolescents today find it harder to get hold of alcohol than before, which seems to have reduced their drinking (Raitasalo, Simonen, Tigerstedt, Mäkelä, et al., 2018; Kraus et al., 2016).

7.2.1 Short summary

7. Lower affordability and economic shifts?

⁵⁰ In the adult population, changes in availability often have different impacts in different socioeconomic groups and different drinking groups (Mäkelä et al., 2002). Alcohol consumption increased especially among those aged 45–64 and among lower educated people following the reduction in alcohol prices in 2004 in Finland (Helakorpi et al., 2010).

- Economic factors have a bearing on adolescent drinking. Economic shifts show in adult drinking and the total consumption of alcohol; lower affordability has meant less drinking. However, underage drinking has not followed trends in adult drinking after the turn of the millennium. Adolescent drinking started to decline during a period when alcohol use was still increasing among adults.
- The effect of economic factors thus looks different for adolescents than for adults.
- Disposable income (pocket money or self-earned money) is important in how much young people drink. The , however, of income may be less significant today, but this should be confirmed by more studies.
- The factors that impact adolescent drinking are in part different from those reducing adult drinking.
- *Reductions in availability of alcohol*, or perceptions among young people that it is hard to get hold of alcohol, have played a part in young people's drinking decline (Raitasalo et al., 2018). Availability is manifested in other ways than the total consumption of alcohol among adults.

7.3 Other factors

7.3.1 Alcohol advertising and the media

Exposure to alcohol advertising and positive images in the media are connected to how adolescents drink (Soikkeli, 2010). There are no easy answers on how and why this is true (Hellman, 2011; Hellman et al., 2013).

Exposure to images of alcohol use in movies seems to connect to binge-drinking among adolescents independently of cultural context, claims a comparative study on Iceland and five other European countries⁵¹ (Thorlindsson et al., 2012). Furthermore, a study has compared attitudes toward alcohol (positive or negative) in Norway, where there is virtually no alcohol advertising, and in the US, where there is more alcohol advertising. It was found that among students from either country who had no personal experience with alcohol, frequent television viewers were more likely than infrequent viewers to see drinking as a normative behaviour with positive outcomes (Thomsen et al., 2004).

⁵¹ Exposure to alcohol use in movies was estimated from the 250 top-grossing movies of each country (in 2004–2009). The study found that adolescents (mean age 13.4) with higher exposure to alcohol use in movies were significantly more likely to have engaged in binge-drinking, even after controlling for age, gender, family affluence, school performance, television screen time, sensation seeking and rebelliousness, and frequency of drinking of peers, parents, and siblings.

There have been some efforts to curb alcohol advertising that have taken place at the same time as alcohol use among adolescents has declined⁵². In Finland for instance some of the regulations on alcohol advertising that were passed in 2015 carried the specific motivation to protect children and young people from alcohol advertising. Also, in Finland some of the regulations on alcohol advertising that were passed in 2015 carried the specific motivation to protect children and young people from alcohol advertising. Outdoor alcohol advertising was restricted, and the promotion of alcohol on television and radio was restricted to certain times of day. There are also restrictions on alcohol advertising on social media (Kinnunen, 2017), but social media is not easily controlled through legislation (Katainen et al., 2018).

Outdoor campaigns, too, have sought to reduce drinking in Finland. A campaign called 'When you're drunk you're an idiot' (*Kännissä olet ääliö*) showed well-dressed young people vomiting all over their clothes. Campaigns have been directed at parents in many Nordic countries, insisting that parents are role models in drinking and that they should not give alcohol to minors. While it is hard to evaluate how well these campaigns work, Bhattacharya concludes that negative media coverage may impact young people's drinking. This makes sense, as we know that positive advertising has an effect as well.

Internet sources, communities, and social media also play a role in how young people drink (Brunborg et al., 2017). However, evaluations of online preventive initiatives or restrictions are so far scarce (Katainen et al., 2018). The impact of online marketing and marketing through different media (television, outdoor posters, etc.) needs to be taken into account in the planning of preventive programmes and also when evaluating their impact (van Dalen & Kuunders, 2006).

7.3.2 Peers

Young people with peers who drink are more prone to drinking themselves. This is verified in many studies (Kristjánsson et al., 2013). However, what is unclear is to what degree individuals are pushed into drinking by their drinking peers and to what degree young people who are inclined to drink look for company that will make drinking possible. There is also some evidence of young people believing that their peers drink more than they actually do drink (Konu & Lintonen, 2004), but this overestimation may not be as great or have as large an effect as

⁵² Alcohol advertising was, however banned already in 1928 in Iceland and public opinion has been very supportive of this law (Jónsson & Kristjánsson, 2013).

is sometimes claimed. Young people often have quite accurate knowledge about their peers' doings (Pape, 2012).

Schools in areas where drinking is prominent often have larger shares of drinkers, but other factors – such as a large share of families with problematic backgrounds and a high probability of associating with substance-using peers – often play a part in explaining this effect.⁵³ The effect of the family is important in these situations, protecting against drinking in an area where drinking is prominent or creating risk factors for adolescent drinking (Bernburg et al., 2009; see also section 7.5 in this report for parental influence).

It seems that having *organised hobbies protects* adolescents against both drinking and other delinquent habits (see Andersson et al., 2012; Thorlindsson et al., 2006). For example, active engagement in sports clubs in Sweden (Elofsson et al., 2014) and Finland (Eloranta & Suhonen, 2010) seems to indicate less drinking. Indeed, the preventive work carried out in Iceland emphasises the importance of supervised leisure activities for young people. Parents are also given information about the negative effects of adolescents just 'hanging out' in peer groups. The Icelandic measures simultaneously stress that prevention needs to take place on many levels at the same time; it is important that families spend time together and that there are efforts to make young people feel good at school (Kristjansson et al., 2010; Halldorsson et al., 2014). Targeting many levels at the same time seems to be a good idea. Efforts that only target schools or parents are not always effective (Pape, 2018).

The fact that drinking is a collective behaviour probably means that when young people at large drink less, this has positive effects on the whole generation. It may change the role of alcohol altogether and render it less positive when young people get together (Lähteenmaa, 2007), even if there still exist youth groups that favour drinking. Collective changes of drinking habits take time (Room et al., 2002).

⁵³ An Icelandic study found that neighbourhoods with weak social ties to parents and coercive family interaction were likely to have a contextual effect on adolescent substance use (cigarette smoking, heavy drinking, and lifetime cannabis use). This is because adolescents living in neighbourhoods with disrupted family processes were more likely to associate with (substance-using) peers (Bernburg et al., 2009).

7.3.3 Preventing adolescent drinking

7.3.3.1 *The total consumption approach and adolescents*

Prevention of drinking relies in most Nordic countries⁵⁴ on the so-called total consumption approach or total consumption model. The *total consumption* model builds on the co-variation between the mean consumption of alcohol in a society and the share of high consumers of alcohol. It means that when the total consumption of alcohol in a society declines, the heavy consumers also drink less – those who usually suffer the vast majority of negative consequences of drinking. However, because ‘normal’ consumers constitute the majority of drinkers, a relatively small decrease in their drinking will result in an important public health effect, even if their risk for negative consequences on an individual level is smaller than among heavy consumers (Room & Livingston, 2017).

In practice the Nordic countries enact the total consumption approach by limiting availability through pricing, opening hours, and selling wines and spirits in alcohol monopoly stores. With the exceptions of Denmark and Greenland, the Nordic countries regulate alcohol sales through state alcohol monopolies (Alko, Systembolaget, Vinmonopolet, Vínbúð, Rúsdrekkasøla Landsinsetc).

Danielsson et al. (2012) have examined whether the so-called *prevention paradox* may also be supported among young people in 23 European countries, including the Nordics. The prevention paradox argues that a majority of alcohol-related problems in a population come from moderate drinkers because they are more numerous than heavy drinkers, although the latter have a higher individual risk of adverse outcomes. The study analysed data on 7288 alcohol-consuming adolescents aged 13–17 years. The results showed that the bottom 90% of consumers accounted for a large majority of the alcohol-related problems among boys and girls at all ages.⁵⁵ The researchers suggest that the prevention paradox is valid for adolescent boys and girls aged about 15 years and applies to a large range of alcohol-related problems. Heavy episodic drinking should be noted particularly.

In order to achieve positive outcomes among young people at large, studies point at many reasons for targeting the entire population of young people with preventive measures instead of just a small heavy-drinking minority (Danielsson et al., 2012; Norström & Pape, 2012).

⁵⁴ In many respects, however, the Danish policy does not comply with this approach, largely because there is no Danish alcohol monopoly and because the legal age for buying beer is lower in Denmark than in the other Nordics.

⁵⁵ The share of problems accounted for by monthly heavy episodic drinking increased with age, from around 10% among those aged 13 years to >50% among those aged 17 years.

7.3.3.2 Preventive programmes

There have been many preventive efforts to curb adolescent drinking. For a more exhaustive review see for example Emmers et al. (2015). In this section we will briefly mention studies reviewing preventive programmes, and will touch upon some Nordic studies.

It is not easy to establish to what degree, if any, different preventive programmes or efforts have managed to reduce drinking. This is partly because many evaluations of preventive programmes do not include a proper comparison group. In such circumstances, not much can be said about the usability or otherwise of a programme (Pape, 2009).

School-based prevention programmes seem to produce a small but consistent positive effect, but it is less clear what the 'active ingredient' is; which group should one target, in which setting, and in which circumstances? (Emmers et al., 2015; see also Beckman et al., 2017).

It has been similarly hard to demonstrate the effectiveness of information campaigns or prevention programmes that solely include the parents in changing young people's drinking habits. For instance, a randomised study where one group took part in a preventive programme and the other did not – in other respects a similar group – showed no impact on parental attitudes (Bodin & Strandberg, 2011). The effects of many preventive programmes aimed at parents, more or less exhaustive or simply informative, often remain uncertain (Adolfson et al., 2017; Hallgren & Andréasson, 2013).

It is also often the case that the participating parents are those who from the start show an interest in ways of intervening in young people's use of alcohol or wish to promote a healthy upbringing. As a result, their attitudes are not much changed in the process (Raitasalo, 2003; Rehnman et al., 2005; Sulkunen et al., 2004).⁵⁶

It seems possible to engage parents in community action for prevention purposes. However, the possible effectiveness of these interventions on adolescent drinking itself is hard to measure (Rehnman et al., 2005).

⁵⁶ In the evaluation of the Finnish Klaari initiative, for example, concerns were voiced whether it reached all socioeconomic groups (Raitasalo, 2003).

As such, many factors correlate with reduced drinking. However, a correlation does not in itself imply a causal influence. In Iceland, for example, there have been changes in what the researchers call 'primary prevention variables' as levels of youth drinking have gone down. The levels of parental monitoring, parental social involvement, and participation in organised sports have increased, and there is reduced participation in a party lifestyle (Kristjansson et al., 2016). Many preventive efforts have been taken to combat young people's drinking that have shaped the lives of young people in Iceland and where these factors have been emphasised. Alcohol use has dropped dramatically at the same time. However, the interventions have unfortunately not yet been externally evaluated to establish what influences what (see section 4.3.1 in this report).

It may be hard to evaluate all effects of preventive programmes, because alcohol cultures change slowly and in interaction with societal restrictions and cultures (Room, 2002). Thus, interventions could theoretically produce results long after the intervention, which is hard or impossible to measure reliably. Intervention evaluation is also hard because a programme that is implemented in one community may 'spill out' into another, thus making it difficult to use neighbouring communities as control groups (Rehman et al., 2005).

For these reasons (lack of reliable comparisons groups, collective nature of drinking, interplay between policy level and individual level, etc.) it is difficult to establish what young people's drinking would look like if we did not have preventive programmes at all. We need more good evaluation of programmes to gain insights into how they do or do not work (Emmers et al., 2015; Pape, 2018).

Studies suggest that preventive efforts should in most cases target the entire age groups of young people instead of only groups of heavy drinkers. An important aim is also to reduce the total consumption of alcohol among young people and thus alcohol-related harm (Norström & Pape, 2012). Targeting special groups that are especially prone to heavy drinking or to developing problems with alcohol should be regarded as important as well in some circumstances. Such groups might be heavy-drinking young people, immigrants, children from unfavourable social or family backgrounds or children in foster care, and victims of complex trauma such as violence or sexual abuse (Torikka et al., 2017). A Norwegian study by Nordfjærn et al. (2013) found that the transition between secondary school and high school may constitute a risk period for establishing problem behaviours. Accordingly, they argue that interventions should target this period.

7.3.3.3 Icelandic prevention strategies for young people

Much media coverage has been given to preventive work in Iceland on young people's drinking. At the beginning of the 1990s, drinking and other problem behaviours in Iceland had reached an alarming level. Today, in 2019, these behaviours have decreased drastically. Many measures have been taken to prevent young people from drinking and behaving delinquenty.⁵⁷

A law imposed a juvenile curfew: children aged 13–16 were not allowed to stay out after 10pm in winter and midnight in summer (Iceland's Child Protection Act no. 80/2002 Art. 92). Parents are furthermore carefully instructed to enforce the age-limit for buying alcohol (20 years)⁵⁸

'Youth in Iceland' was established as a group of Icelandic social scientists at the Icelandic Centre for Social Research and Analysis (ICSRA), a non-profit research institute in the City of Reykjavik and now affiliated with Reykjavik University, along with policy makers and practitioners in the field. The collaboration began in the 1990s, and the ICSRA came into being in 1999. The research was previously conducted at the Institute for Educational Research under the Ministry of Education. The research group has led the development in prevention work in collaboration with for example the City of Reykjavik.

The Icelandic preventive work is based on the assumption that alcohol and drug education should focus on many areas of adolescent lives in addition to informing young people (and their parents) of the dangers of alcohol and drugs. The work has concentrated on key factors singled out by international and national research on prevention. The main areas are participation in organised activities – especially sport – three or four times a week (minimising unsupervised free time and controlling negative effects of peer groups), total time spent with parents during the week (parental control and connection), feeling cared about at school (general and mental well-being), and not being outdoors late at night; and telling parents how to address the negative effects of peer groups (Kristjánsson et al., 2009; Jónsson personal communication, May 2018).

Importantly, state funding has been increased for organised sport, music, art, dance, and other clubs to give children alternative ways to feel part of a group

⁵⁷ Although there is much positive effect to be ascribed to the preventive work, it is still unclear to what degree the preventive work itself and to what degree other factors (such as the economic crisis of 2008 and other factors) account for the highly positive development in young people's drinking. There have been some plans to carry out a comprehensive evaluation of the model, but it is uncertain when the plans will actualize.

⁵⁸ The age-limit for buying alcohol became 20 in 1969. Alcohol advertising has been banned since 1928. Both laws enjoy great support from the public (Jónsson & Kristjánsson, 2013).

other than drinking. Children from low-income families receive particular help to take part. In Reykjavik, for instance, families may receive 35,000 krona (around 400 euro or 3899 NOK) per year per child for recreational activities.

Parental organisations are by law established in every school, along with school councils with parent representatives. Home and School, the national umbrella body for parental organisations, introduced agreements for parents to sign. The content varies but may include such promises as not allowing children to have unsupervised parties, not to buy alcohol for minors, and to keep an eye on the well-being of other children. Parents are encouraged to attend talks at school on the importance of spending time with their children and taking an active role in their lives (Kristjánsson et al., 2009; Youth in Iceland, 2018).

The factors singled out are well known to researchers in preventive work among young people. However, the proponents of the Youth in Iceland model claim that the factors are slightly different in every country/community and that they also change quickly. Thus, they advocate yearly surveys: Youth in Iceland surveys should include all fifth, sixth, and seventh graders in all elementary schools in Iceland; eighth, ninth, and tenth graders in secondary school; and all high school students in the country. The surveys include many types of questions around youth well-being and generate information two to three months after the collection. The information can be used both by researchers and preventive workers in the communities (see more in Kristjánsson et al., 2009; Youth in Iceland, 2018).

7.3.4 Short summary

- Exposure to alcohol advertising and positive images in the media are connected to how adolescents drink, suggests a strong body of research.
- The impact of online marketing and marketing through different media (television, outdoor posters, etc.) are all important factors to be taken into account when planning preventive programmes and also when evaluating their impact.
- Young people with peers who drink are more prone to drinking themselves. It is unclear to what degree this is a question of the individual being pushed into drinking by their drinking peers and to what degree young people who are inclined to drink look for company that will make drinking possible.
- (Adolescent) drinking is to a high degree *collective*; drinking habits are connected to the surrounding norms and drinking cultures. Drinking habits are thus formed in interaction based on groups in the social context.

- Studies point at many reasons for targeting the entire population of young people with preventive measures instead of just a small heavy-drinking minority. Only thus are positive outcomes possible among young people at large.
- It is not easy to establish to what degree, if any, different preventive programmes aimed at reducing adolescent drinking have indeed worked. One reason is that many evaluative efforts of preventive programmes do not include a proper comparison group.
- School-based prevention programmes seem to produce a small but consistent positive effect on drinking, but it is less clear what the 'active ingredient' is.
- Preventive work carried out in Iceland emphasises the importance of supervised leisure activities for young people. Parents should also be given information about the negative effects of adolescents' 'hanging out' in peer groups. The Icelandic preventive efforts further contain *action at many levels*, information in the school, promoting family time, promoting supervised leisure time, including restrictions on young people being outdoors in the evenings, and parental agreements in the schools to not give alcohol to minors, etc. (see section 4.3.1 in this report). It is still unclear which of these factors are the effective ones, but it is likely a mixture of many factors, control being an important one.

7.4 Summary of chapter 7

- The reasons for adolescent drinking are many, pertaining to area level, school level, parental drinking, parental attitudes toward drinking, peers, leisure activities, available money, etc. There is also the impact of alcohol marketing, official policies, support for families, prevention, drinking culture, etc.
- The reasons for adolescent drinking are partly different from those behind adult drinking.
- Adolescent lives have changed in many ways during the time period that drinking has declined. However, *it is still under study which of these factors have been decisive for the decline in adolescent alcohol use over time* (see Raninen, 2018). The researchers are still looking for answers.
- Aveek Bhattacharya (Institute of Alcohol Studies, London) has listed and evaluated the relevance of **seven often used explanations/hypotheses** for the decline in youth drinking. Bhattacharya's list of explanations are often used as a **point of departure** in studies exploring reasons for the decline in adolescent drinking.

- The seven points presented by Bhattacharya are: 1) better legal enforcement; 2) rise of new technology; 3) changing social norms; 4) happier and more conscientious children; 5) better parenting; 6) demographic shifts; and 7) lower affordability and less economic confidence.
- This report has examined the Nordic discussion on the explanations of the decline in young people's drinking through these seven points.
- A main reflection is that there is no single explanation for the decline, but several at the same time.
- The few Nordic studies that have statistically explored factors influencing decline in adolescent drinking over time have found support for factors belonging to the following themes: *changes the control of the young people's free time, increased restrictive attitudes among adults toward young people's drinking along with other possible changes in parenting.*
- A Finnish study cites the following factors as significant for instance:
 - Parents know where their children spend their free time
 - Adolescents find it harder to get hold of alcohol
 - The risk for drinking when going out with friends is lower than it used to be
- Researchers agree that *these and many other factors need to be investigated further.*
- *Changes in parenting seem to be important* although what it is in parenting changes that has been important is not yet completely clear.
- Changes in youth culture may have deflated the role of alcohol. This should be explored further. There are also differences between the Nordic countries regarding this. In Denmark drinking still plays an important role in youth culture, and drinking still remains very common despite the decline.
- There seems to be little or no support for the idea that young people spend more time in front of their digital equipment and less on the streets, thus drinking less. However, the area needs more research. It is important to specify what type of equipment is being used (computer, smartphone, etc.) and what it is used for (games or social interaction of other type, etc.) Social media can also be used to get access to alcohol. Factors such as mental health, social capital, and loneliness should also be taken into account in this research.
- The sometimes-voiced concern that declining alcohol use would mean substituting alcohol with cannabis does not receive support from current Nordic research. The absolute majority of young people who use cannabis also use alcohol, and the substances are usually used at the same time. Cannabis use has not increased among underage young people (with the

exception of a recent Norwegian study where some increase was detected). However, attitudes toward cannabis use have become more lenient; young people today do not perceive cannabis to be as risky as young people did 10 years ago. Also, cannabis use among young adults has increased.

- Analyses that try to answer why young people today drink less than young people did 10 or 15 years ago should further look at: youth living conditions and habits, time use, leisure activities, family backgrounds and conditions, interaction with parents and peers, and alcohol use patterns.
- The role of media and official alcohol policy is likely to play an important role as well.

8 Implications for further research and policy

Underage adolescents now drink less than previous generations of young people. To understand why this is happening is important from a research perspective, as it gives insights into changing drinking habits, but also from a policy-making perspective, because the change may be driven by reasons that we are able to influence by policy.

There are many factors in young people's lives that have changed at the same time as youth drinking has declined, but not all these factors necessarily play a role in the decline.

The research should include traditional risk factors for drinking, such as availability, alcohol policy, socioeconomic status, area, parental factors, and changes in them, but should also tackle new ones such as the impact of digital media. Pape et al. (2018) conclude in their literature review that there should be research concerning to what degree and how *parenting* styles or parenting practices have impacted the decline in adolescent drinking and the related risks. Many other factors are similarly salient, such as parental control and the scope of it (Raitasalo, Simonen, Tiggerstedt, Mäkelä et al., 2018; Larm, Livingston, Svensson & Andersson 2016; Raninen et al, 2018). From a policy-making perspective, we should disentangle the global and possibly local protective factors in parenting to support positive developments.

The explanations and studies could pertain to youth living conditions, use of time, leisure activities, home situations, interaction with parents and peers, and use of alcohol and other drugs. The explanations are likely to be complex and to pertain to a variety of factors – some of which are global, others glocal, and yet others local. The interplay between alcohol use and youth research is crucial (Kolind et al., 2013), so changes in youth cultures are particularly relevant. The digital revolution is one big change needing more nuanced attention.

The research should include a global, a comparative, and a Nordic context (Pape et al., 2018; Pennay et al., 2018). Some reasons may only pertain to Nordic states with high social expenditures and alcohol monopolies. Other reasons may be more global, as the change in drinking habits has been happening in different Western countries in different temporal, political, and economic contexts.

Some important Nordic issues discussed in this report deal with the collectivity of changes in drinking habits. It seems that drinking in some Nordic countries has declined evenly both among heavy drinkers and light drinkers. It would be important to know whether this is true in all Nordic countries.

It is also important to examine the problem groups that have started to drink more or are at risk for doing so. For example, in Finland a group with unemployed parents and depression have started to drink more (Torikka et al., 2016).

An important question concerns the role of changes in mental health among young people. Stress, anxiety, and depression have become more common among adolescents at the same time as drinking has become less common. Some researchers talk about a dead serious generation where norm-breaking behaviour is less common but reactions that turn inward are more common. Some studies indicate that mental health problems may lead to problem drinking in adulthood. This, too, should be studied more closely.

What does the decline in drinking habits mean for coming adult generations; will they drink less as adults than previous generations? There is not yet enough research on this matter, which includes coming of age (and being able to legally buy alcohol) and the many events in young people's lives that this brings (entering into working life, studies or vocational studies, or none of these). Little or less is known about this. Studies on drinking among college and university students in particular would be important in this situation. Denmark currently seems to employ the most systematic studies on young adults after high school or vocational studies. (see the list of the main survey studies on adolescent and youth drinking in the Nordic states in Appendix 1). Furthermore, longitudinal studies following different cohorts from adolescence to adulthood are also necessary in order to understand whether young people who drink less than previous generations as young will continue to do so when they reach adulthood

Drink preference is a small, but not necessarily an insignificant factor. While alcohol use has declined in Finland, the use of alcopops has increased (Lintonen et al., 2018). Researchers ask what the effects might be of the 2018 alcohol legislation in Finland that, among other things, brought alcopops in grocery stores.

Another question is the interplay between alcohol use and cannabis use and use of other drugs. Currently, research does not support the claim that young people would be supplementing alcohol with cannabis. Cannabis users in the absolute majority of cases also use alcohol, and the substances are typically used together (Pape, Rossow, & Storvoll, 2009). Use of cannabis has also remained stable.

There exists a group of adolescents who drink large amounts of alcohol and simultaneously use cannabis. Also, they often have many other social problems (Anderberg & Dahlberg, 2016; see also Torikka, 2016). In Iceland it seems that the group of risky cannabis users has emerged at the same time that risky alcohol use has reduced (Arnarsson et al., 2018). Research should examine whether the trend of mainly concurrent alcohol and cannabis use continues and which factors are central when cannabis is used on its own. It is also important to continue careful analysis of the polydrug-using group and its background factors. Knowledge about the harmful outcomes of polydrug use and concurrent problems would help further to design appropriate support.

The question of alcohol-related harm should be further analysed. Drinking among young people has declined, but how about the alcohol-related harm that they themselves experience from the drinking of family members or peers? Has there been an equal decline in this area? (Anderberg & Dahlberg, 2016)

Pennay et al. (2018, p. 119) summarise findings from recent studies on (changes in) adolescent drinking. They argue for more research globally so that we might fully grasp what is going on

Longitudinal panel and qualitative studies are needed to complement and inform continuing cross-sectional research. Secondly, a collaborative cross-cultural approach is needed to contextualise the international scale of the trend and thirdly, future research must be situated within a historical and generational perspective to understand declines in adolescent drinking in the context of a broader shift in adolescent behaviours.

9 References

- Aaltonen, M. (2007). *Alkoholi väkivaltatilanteissa – syy, tekosyy vai sattuma? Yhdeksäsluokkalaisten nuorten alkoholikulutuksen yhteys väkivaltaiseen käyttäytymiseen*. [Alcohol in violent situations, reason, excuse or coincidence?] (Master's thesis). Helsinki: University of Helsinki.
- Abebe, D. S., Frøyland, L. R., Bakken, A., & von Soest, T. (2016). Municipal-level differences in depressive symptoms among adolescents in Norway: Results from the cross-national ungdataba study. *Scandinavian Journal of Public Health, 44*(1), 47-54.
- Amundsen, E. J., Rossow, I., & Skurtveit, S. (2005). Drinking pattern among adolescents with immigrant and Norwegian backgrounds: A two-way influence? *Addiction, 100*(10), 1453–1463.
- Ander, B., Abrahamsson, A., & Bergnehr, D. (2017). 'It is ok to be drunk, but not too drunk': Party socialising, drinking ideals, and learning trajectories in Swedish adolescent discourse on alcohol use. *Journal of Youth Studies, 20*(7), 841–854.
- Anderberg, M., & Dahlberg, M. (2015). Riskfylld alkoholanvändning hos ungdomar med cannabisproblem. *Socialmedicinsk tidskrift, 92*(4), 484–494.
- Anderberg, M., & Dahlberg, M. (2016). Experiences of victimization among adolescents with substance abuse disorders in Sweden. *Scandinavian Journal of Child and Adolescent Psychiatry and Psychology, 4*(3), 123. <https://doi.org/10.21307/sjcapp-2016-019>
- Andersen, P., Pedersen, W., & Bakken, A. (2017). Russetid i Oslo. Hvem deltar? Hvem feirer hardest? In J. Ljunggren (Ed.), *Oslo – ulikhetenes by* (pp. 307–323). Oslo: Cappelen Damm Akademisk.
- Andersson, A., Andersson, C., Holmgren, K., Mårdby, A., & Hensing, G. (2012). Participation in leisure activities and binge drinking in adults: Findings from a Swedish general population sample. *Addiction Research & Theory, 20*(2), 172–182. <https://doi.org/10.3109/16066359.2011.596595>
- Andersson, B., Hansagi, H., Thakker, K. D., & Hibell, B. (2002). Long-term trends in drinking habits among Swedish teenagers: National school surveys 1971–1999. *Drug and Alcohol Review, 21*(3):253–260.

- Arnarsson, A., Kristofersson, G. K., & Bjarnason, T. (2018). Adolescent alcohol and cannabis use in Iceland 1995–2015. *Drug and Alcohol Review, 37*(S1), S49–S57. <https://doi.org/10.1111/dar.12587>
- Askeland, K., Sivertsen, B., Skogen, J., La Greca, A., Tell, G., Aarø, L., & Hysing, M. (2017). Alcohol and drug use among internationally adopted adolescents: Results from a Norwegian population-based study. *American Journal of Orthopsychiatry, 88*.
- Austdal, L. E., Strand, M. C., Vindenes, V., & Bogstrand, S. T. (2015). Forekomst av skader i russetiden. *Tidsskrift for Den norske legeforening, 135*(7):648–652.
- Bakken, A. (2018a). *Ungdata 2018. Nasjonale resultater*. NOVA Rapport 8/2018. Oslo: Nova.
- Bakken, A. (2018b). *Ung i Oslo 2018*. NOVA Rapport 6/18. Oslo: Nova.
- Bastholm, S. & Järvinen, M. (2018). Stabilt moderat, 'fling' eller kronisk højt: Unges alkoholbrug fra 15 år til 25/26 år. In M. Järvinen (Ed.), *Unge, alcohol og stoffer. Et 10-årigt forløbsstudie*. København: Københavns Universitet.
- Beckman, L., Svensson, M., Geidne, S., & Eriksson, C. (2017). Effects on alcohol use of a Swedish school-based prevention program for early adolescents: A longitudinal study. *BMC Public Health, 17*(2). <https://doi.org/10.1186/s12889-016-3947-3>
- Bendtsen, P., Damsgaard, M. T., Huckle, T., Caswell, S., Kuntsche, E., Arnold, P., ... Holstein, B. E. (2014). Adolescent alcohol use: A reflection of national drinking patterns and policy? *Addiction, 109*(11), 1857–1868.
- Bendtsen, P., Mikkelsen, S. S., & Tolstrup J. S. (2015). *Ungdomsprofilen 2014: Sundhedsadfærd, helbred og trivsel blandt elever på ungdomsuddannelser*. København: Statens Institut for Folkesundhed & Odense: Syddansk Universitet.
- Berg, N., Kiviruusu, O., Huurre, T., Lintonen, T., Virtanen, P., & Hammarström, P. (2017). Unemployment and heavy episodic drinking from adolescence to mid-life in Sweden and Finland. *European Journal of Public Health, 27*(suppl_3).
- Bergh, D., Hagquist, C., & Starrin, B. (2011). Parental monitoring, peer activities and alcohol use: A study based on data on Swedish adolescents. *Drugs: Education, Prevention and Policy, 18*(2), 100–107.

Berggren, E., Björkstén, J., & Carlson, P. (2016). *Sociala bestämningsfaktorer för alkoholvanor och alkoholrelaterade problem bland Stockholms ungdomar*. Socialförvaltningen 2016-09. Stockholm: Stockholms stad.

Bernburg, J., Thorlindsson, T., & Sigfusdóttir, I. (2009). Relative deprivation and adolescent outcomes in Iceland: A multilevel test. *Social Forces*, 87(3), 1223–1250.

Bhattacharya, A. (2016). *Youthful abandon: Why are young people drinking less?* London: Institute of Alcohol Studies.

Bjarnason T. (2006). Polarization in alcohol consumption among Icelandic adolescents, 1995–2003. *Nordisk alkohol- & narkotikatidskrift*, 23, 51–58.

Bjarnason, T., Andersson, B., Choquet, M., Elekes, Z., Morgan, M., & Rapinett, G. (2003). Alcohol culture, family structure and adolescent alcohol use: Multi-level modeling of frequency of heavy drinking among 15–16 year old students in 11 European countries. *Journal of Studies on Alcohol and Drugs*, 64(2), 200–208.

Bjarnason, T., Mogensen, B., Stefansdóttir, D. Y., & Asmundsson, J. (2007). The role of alcohol consumption in adolescent emergency room visits at Landspítali University Hospital, Iceland [Thattur afengis í komum unglunga á slysa- og bradadeild Landspítala]. *Laeknabladid*, 93(3), 183–187.

Bjarnason, T., Thorlindsson, T., Sigfusdóttir, I. D., & Welch, M. R. (2005). Familial and religious influences on adolescent alcohol use: A multi-level study of students and school communities. *Social Forces*, 84(1), 375–390.

Bloomfield, K., Wicki, M., Gustafsson, N., Mäkelä, P., & Room, R. (2010). Changes in alcohol-related problems after alcohol policy changes in Denmark, Finland, and Sweden. *Journal of Studies on Alcohol and Drugs*, 71(1), 32–40.

Bodin, M. C., & Strandberg, A. K. (2011). The Örebro prevention programme revisited: A cluster-randomized effectiveness trial of programme effects on youth drinking. *Addiction*, 106(12), 2134–2143. <https://doi.org/10.1111/j.1360-0443.2011.03540.x>

von Borczyskowski, A., Vinnerljung, B., & Hjern, A. (2013). Alcohol and drug abuse among young adults who grew up in substitute care: Findings from a Swedish national cohort study. *Children and Youth Services Review*, 35(12), 1954–1961.

- Bränström R., & Andréasson, S. (2008). Regional differences in alcohol consumption, alcohol addiction and drug use among Swedish adults. *Scandinavian Journal of Public Health, 36*(5), 493–503.
- Bratberg, G. H., Wilsnack, S. C., Wilsnack, R., et al. (2016). Gender differences and gender convergence in alcohol use over the past three decades (1984–2008), The HUNT study, Norway. *BMC Public Health, 16*(723).
<https://doi.org/10.1186/s12889-016-3384-3>
- Brunborg, G. S., Andreas, J. B., & Kvaavik, E. (2017). Social media use and episodic heavy drinking among adolescents. *Psychological Reports, 120*(3), 475–490.
- Brunborg, G. S., Bye E. K., & Rossow, I. (2014). Collectivity of drinking behavior among adolescents: An analysis of the Norwegian ESPAD data 1995–2011. *Nordic Studies on Alcohol and Drugs, 31*(4), 389–400.
- Brunborg, G., Norström, T., & Storvoll, E. (2018). Latent developmental trajectories of episodic heavy drinking from adolescence to early adulthood: Predictors of trajectory groups and alcohol problems in early adulthood as outcome. *Drug and Alcohol Review, 37*, 389–395.
- Busch V., Manders, L. A., & de Leeuw J. R. (2013). Screen time associated with health behaviors and outcomes in adolescents. *American Journal of Health Behavior, 37*(6), 819–830.
- Bye, E. (2012). Bruk av alkohol og cannabis blant ungdom i perioden 1995–2011 [Use of alcohol and cannabis among youth in 1995–2011]. *Tidsskrift for ungdomsforskning, 12*(2), 89–101.
- Bye, E. K., & Rossow, I. (2008). Is the impact of alcohol consumption on violence relative to the level of consumption? *Journal of Scandinavian Studies in Criminology and Crime Prevention, 9*(1), 31–46.
- Bye E. K., & Rossow, I. (2010). The impact of drinking pattern on alcohol-related violence among adolescents: An international comparative analysis. *Drug and Alcohol Review, 29*(2), 131.
- Bye, E. K., & Skretting, A. (2017). *Bruk av rusmidler blant 15–16-åringar. Resultater fra ESPAD 1995–2015*. Rapport 06.2017. Oslo: Folkehelseinstituttet.

Carlson, P., & Almquist, Y. B. (2016). Are area-level effects just a proxy for school-level effects? Socioeconomic differences in alcohol consumption patterns among Swedish adolescents. *Drug and Alcohol Dependence*, *166*, 243–248.

Curran, T., & Hill, A. P. (2017, December 28). Perfectionism is increasing over time: A meta-analysis of birth cohort differences from 1989 to 2016. *Psychological Bulletin*. Advance online publication. <https://doi.org/10.1037/bul0000138s>

Currie, C. E., Elton, R. A., Todd, J., & Platt, S. (1997). Indicators of socioeconomic status for adolescents: The WHO Health Behaviour in School-aged Children Survey. *Health Education Research*, *12*(3), 385–397.

van Dalen, W. E., & Kuunders, M. M. (2006). Alcohol marketing and young people: An analysis of the current debate on regulation. *Nordisk alkohol- & narkotikatidskrift*, *23*(6), 415–426.

Danielsson, A., Romelsjö, A., & Tengström, A. (2011). Heavy episodic drinking in early adolescence: Gender-specific risk and protective factors. *Substance use & Misuse*, *46*(5), 633–643.

Danielsson, A., Wennberg, P., Hibell, B., & Romelsjö, A. (2012). Alcohol use, heavy episodic drinking and subsequent problems among adolescents in 23 European countries: Does the prevention paradox apply? *Addiction*, *107*(1), 71–80. <https://doi.org/10.1111/j.1360-0443.2011.03537.x>

Danielsson, A., Wennberg, P., Tengström, A., & Romelsjö, A. (2010). Adolescent alcohol use trajectories: Predictors and subsequent problems. *Addictive Behavior*, *35*(9), 848–852.

Degni, F., Suominen, S., Kauhanen, J., & El Ansari, W. (2010). Religious-ethnic differences in alcohol consumption and abstinence among 15–17-year-old adolescents attending school in Turku, Finland. *Finnish Journal of Ethnicity & Migration*, *5*(2), 63–69.

Demant, J., & Järvinen, M. (2006). Constructing maturity through alcohol experience: Focus group interviews with teenagers. *Addiction Research & Theory*, *14*(6), 589–602.

Demant, J., & Krarup, T. M. (2013). The structural configurations of alcohol in Denmark: Policy, culture, and industry. *Contemporary Drug Problems*, *40*(2): 259–289.

Demant, J., & Ravn, S. (2013). Communicating trust between parents and their children: A case study of adolescents' alcohol use in Denmark. *Journal of Adolescent Research, 28*(3), 325–347. <https://doi.org/10.1177/0743558413477198>

Demant, J., & Törrönen, J. (2011). Changing drinking styles in Denmark and Finland: Fragmentation of male and female drinking among young adults. *Substance Use and Misuse, 46*(10), 1244–1255.

DeWit, D. J., Adlaf, E. M., Offord, D. R., & Ogborne, A. C. (2000). Age at first alcohol use: A risk factor for the development of alcohol disorders. *The American Journal of Psychiatry, 157*(5), 745–750.

Dick, D. M., Bernard, M., Aliev, F., Viken, R., Pulkkinen, L., Kaprio, J., & Rose, R. J. (2009). The role of socioregional factors in moderating genetic influences on early adolescent behavior problems and alcohol use. *Alcoholism: Clinical and Experimental Research, 33*(10), 1739–1748. <https://doi.org/10.1111/j.1530-0277.2009.01011.x>

Dickson, D. J., Laursen, B., Stattin, H., & Kerr, M. Parental supervision and alcohol abuse among adolescent girls. *Pediatrics, 136*(4), 617–624.

Edwards, A. C., Sihvola, E., Korhonen, T., Pulkkinen, L., Moilanen, I., Kaprio, J., . . . Dick, D. M. (2011). Depressive symptoms and alcohol use are genetically and environmentally correlated across adolescence. *Behavior Genetics, 41*(4), 476–87.

Egnell, S., Villman, E., & Obstbaum Y. (2019, forthcoming). *Cannabis, policy and legal measures in the Nordic countries. A report on how use and possession of cannabis is controlled in the Nordic legal systems*. NVC report. Stockholm: Nordic Welfare Centre.

Elgan, T. H., & Leifman, H. (2013). Prevalence of adolescents who perceive their parents to have alcohol problems: A Swedish national survey using a web panel. *Scandinavian Journal of Public Health, 41*(7), 680–683.

Ellonen, N., & Aaltonen, M. (2012). Association between drinking and victimisation among Finnish adolescents: Estimating the extent of the spurious effect. *Nordic Studies on Alcohol and Drugs, 29*(2), 125–138.

Elmeland, K., & Kolind, T. (2012). 'Why don't they just do what we tell them?' Different alcohol prevention discourses in Denmark. *Young, 20*(2), 177–197.

Elmeland, K., & Villumsen, S. (2013). Changes in Danish public attitudes and norms regarding alcohol consumption and alcohol policy, 1985–2011. *Nordic Studies on Alcohol and Drugs*, 30(6), 525–538. <https://doi.org/10.2478/nsad-2013-0049>

Elofsson, S., Blomdahl, U., & Lengheden, L. (2014). Dricker ungdomar i idrottsförening mindre alkohol än de som inte är med i en idrottsförening? Stockholms stad-Idrottsförvaltningen, Forskningsenheten.

Eloranta, J & Suhonen, O (2010): Liikunnan harrastamisen yhteydet alkoholin käyttöön ja tupakointiin 14-, 16- ja 18-vuotiailla nuorilla. [Sports hobbies and the connection to alcohol use and smoking among 14, 16 and 18- year old adolescents] Pro gradu : Jyväskylän Yliopisto.

Emmers, E., Bekkering, G., & Hannes, K. (2015). Prevention of alcohol and drug misuse in adolescents: An overview of systematic reviews. *Nordic Studies on Alcohol and Drugs*, 32(2), 183–198.

Englund, A. (Ed). (2016). *Skolelevers drogvanor 2016*. CAN rapport 161. Stockholm: Centralförbundet för alkohol- och narkotikaupplysning CAN.

Englund, A. (2018, July 4). *Skolelevers drogvanor 2018*. CAN. Presentation in Visby.

Englund, J., & Lindberg, J. (2011). *Ungdomars mognad, en avgörande faktor: En kvalitativ studie inriktad på en grupp föräldrar gällande tillhandahållande av alkohol till sina barn*. (Bachelor's thesis). Växjö: Linnéuniversitetet.

Fjær, E. G., Pedersen, W., & Sandberg, S. (2016). Party on wheels: Mobile party spaces in the Norwegian high school graduation celebration. *The British Journal of Sociology*, 67(2), 328–347.

Folkhälsomyndigheten 2018. Skolbarns hälsovanor i Sverige 2017/18. Grundrapport

Frojd, S., Ranta, K., Kaltiala-Heino, R., & Marttunen, M. (2011). Associations of social phobia and general anxiety with alcohol and drug use in A community sample of adolescents. *Alcohol and Alcoholism*, 46(2), 192-199.

Futura 10. (2017). *Datainsamling 2017*. Stockholm: CAN & Karolinska Institutet. <https://www.futura01.se/>

Gronkjaer, M., Curtis, T., de Crespigny, C., & Delmar, C. (2011). Acceptance and expectance: Cultural norms for alcohol use in Denmark. *International Journal of Qualitative Studies on Health and Well-being*, 6(4).

Gronkjaer M., Curtis, T., de Crespigny, C., & Delmar, C. (2013). Drinking contexts and the legitimacy of alcohol use: Findings from a focus group study on alcohol use in Denmark. *Scandinavian Journal of Public Health*, 41(3), 221–229.

Gronkjaer, M., Vinther-Larsen, M., Curtis, T., Gronbaek, M., & Norgaard, M. (2010). Alcohol use in Denmark: A descriptive study on drinking contexts. *Addiction: Research & Theory*, 18(3), 359–370.
<https://doi.org/10.3109/16066350903145056>

Gunnlaugsson, H. (2018). Afbrot og íslenskt samfélag [Crime and Icelandic society]. Reykjavík: University of Iceland Press.

DeHart, T., Tennen, H., Armeli, S., Todd, M., & Mohr, C. (2009). A diary study of implicit self-esteem, interpersonal interactions and alcohol consumption in college students. *Journal of Experimental Social Psychology*, 45(4), 720–730.
<https://doi.org/10.1016/j.jesp.2009.04.001>

Hafstad, G. S., Brunborg, G. S., Kumar, B. N., Lien, L. (2015). Binge drinking, cannabis and tobacco use among ethnic Norwegian and ethnic minority adolescents in Oslo, Norway. *Journal of Immigrant and Minority Health*, 17(4), 992–1001.

Halldorsson, V., Thorlindsson, T., & Sigfusdottir, I. D. (2014). Adolescent sport participation and alcohol use: The importance of sport organization and the wider social context. *International Review for the Sociology of Sport*, 49(3–4), 311–330. <https://doi.org/10.1177/1012690213507718>

Hallgren, M. (2014). Youth alcohol polarization effects in regional but not national data. *Addiction*, 109, 1384–1385. <https://doi.org/10.1111/add.12593>

Hallgren, M., & Andréasson, S. (2013). The Swedish six-community alcohol and drug prevention trial: Effects on youth drinking. *Drug & Alcohol Review*, 32(5), 504–511. <https://doi.org/10.1111/dar.12057>

Hallgren M., Leifman H., Andréasson S. (2012). Drinking less but greater harm: Could polarized drinking habits explain the divergence between alcohol consumption and harms among youth? *Alcohol & Alcoholism*, 47(5), 581–590. 4.

Haugland, S. H. (2012). Er risikofylt rusmiddelbruk vanligere blant ungdom som har sett foreldrene beruset? *Tidsskrift for Den norske legeforening*, 132, 410–413.

Haugland, S. H., Holmen, T. L., Krokstad, S., Sund, E. R., & Bratberg, G. H. (2015). Intergenerational hazardous alcohol use and area factors: The HUNT study, Norway. *Substance Use & Misuse*, 50(14), 1753–1764.

Haugland S. H., Holmen, T. L., Ravndal, E., & Bratberg, G. H. (2013). Parental alcohol misuse and hazardous drinking among offspring in a general teenage population: Gender-specific findings from the young-HUNT 3 study. *BMC Public Health*, 13, 1140.

Hegna, K., Ødegård, G., & Strandbu, Å. (2013). En 'sykt seriøs' ungdomsgenerasjon? *Tidsskrift for Norsk psykologforening*, 50(4), 374–377.

Hellman, M. (2011). Studying young recipients of alcohol marketing: Two research paradigms and their possible consolidation. *Nordic Studies on Alcohol and Drugs*, 28(5–6), 415–432.

Hellman, M., Demant, J., Rolando, S., Rossetti, S., Wothge, J., Gosselt, J., & Bujalski, M. (2013). Above the message and beyond reach: Persuasion knowledge by a European teenage beer commercial audience. *Young*, 21(4), 387–405.

Helmerson Bergmark, K. (2010). Alkohol. In T. Goldberg (Ed.), *Samhällsproblem* (pp.371 – 398). Lund: Studentlitteratur AB.

Henriksen, Ø. (2012). 'They must be 18 years old ... really'. Alcohol debut discourses at parent meetings within alcohol prevention programmes in school. *Nordic Studies on Alcohol and Drugs*, 29(5), 453–466.

Härkönen, J., & Mäkelä, P. (2018). Miten alkoholinkäyttö muuttuu elämänkulun ja syntymäkohortin mukaan? [How does use of alcohol change during the course of life and by birth cohort?]. In P. Mäkelä, J. Härkönen, T. Lintonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo. Suomalaisten muuttuvat alkoholinkäyttötavat* (pp. 147–157). Helsinki: Terveystieteiden tutkimuskeskus ja hyvinvoinnin laitos.

Härkönen, J., Savonen, J., Virtala, E., & Mäkelä, P. (2017). *Juomatapatutkimusten tuloksia. Suomalaisten alkoholinkäyttötavat 1968–2016*. Helsinki: THL.

Jackson, N., Denny, S., & Ameratunga, S. (2014). Social and socio-demographic

neighborhood effects on adolescent alcohol use: A systematic review of multi-level studies. *Social Science & Medicine*, 115, 10–20.

Johnston, L. D., O'Malley, P. M., Miech, R., Bachman, J. G., & Schulenberg, J. E. (2015). *Monitoring the future. National survey results on drug use 1975–2015: Overview, key findings on adolescent drug use*. Ann Arbor: Institute for Social Research, The University of Michigan.

Jónsson, R. M., & Kristjánsson, S. (2013). Alcohol policy and public opinion in Iceland, 1989–2012. *Nordic Studies on Alcohol and Drugs*, 30(6), 539–549.

Järvinen-Tassopoulos, J., & Raitasalo, K. (2017). Ulkomaalaistaustaisten 9.-luokkalaisten nuorten päihteiden käyttö ja rahapelaaminen – Eurooppalaisen koululaiskyselyn tuloksia vuodelta 2015. *Sosiaalilääketieteellinen Aikakauslehti*, 54(3).

Järvinen, M., & Østergaard, J. (2009). Governing adolescent drinking. *Youth & Society*, 40(3), 377–402.

Jääskeläinen, M., Holmila, M., Notkola, I., & Raitasalo, K. (2016). Mental disorders and harmful substance use in children of substance abusing parents: A longitudinal register-based study on a complete birth cohort born in 1991. *Drug and Alcohol Review*, 35(6), 728–740.

Kaarre, O., Kallioniemi, E., Könönen, M., Tolmunen, T., Kekkonen, V., Kivimäki, P., . . . Määttä, S. (2018). Heavy alcohol use in adolescence is associated with altered cortical activity: A combined TMS-EEG study. *Addiction Biology*, 23(1), 268–280.

Karlsdóttir, A., Sigurjónsdóttir, H., Ström Hildestrand, Å., & Cuadrado, A. (2017). *Policies and measures for speeding up labour market integration of refugees in the Nordic region*. Nordregio working paper 2017:8. Stockholm: Nordregio.

Karlsson, T. (2016). *Changes in alcohol policy for young people in Finland 1995–2016*. Unpublished manuscript.

Karlsson, P., Magnusson, C., & Svensson, J. (2016). Does the familial transmission of drinking patterns persist into young adulthood? A 10-year follow up. *Drug and Alcohol Dependence*, 168, 45–51. <https://doi.org/10.1016/j.drugalcdep.2016.08.630>

Karvonen, S. (2010). Jakautuuko nuorten juominen kahtia? *Yhteiskuntapolitiikka*, 75(2), 182–193.

Katainen, A., Kauppila, E., Lindeman, M., Svensson, J., & Hellman, M. (2018). Miten vuoden 2015 alkoholilakiuudistus vaikutti alkoholituotteiden markkinointiin sosiaalisessa mediassa? Sisällönanalyysi sosiaalisen median alkoholimarkkinoinnista Suomessa ja Ruotsissa. [How did the 2015 alcohol legislation reform impact marketing of alcoholic products on social media? Content analysis of social media alcohol marketing strategies in Finland and Sweden, abstract in English]. *Yhteiskuntapolitiikka*, 83(5–6), 483–494.

Kinnunen, J. M., Pere, L., Raisamo, S., Katainen, A., Ollila, H., & Rimpelä, A., (2017). Undersökning om hälsovanor bland unga 2017. Konsumtionen av tobak och alkohol samt penningspel bland unga. Social- och hälsovårdsministeriets rapporter och prememorier 2017:28. Helsingfors: Social- och hälsovårdsministeriet.

Kivivuori, J., Salmi, V., & Jouhki, V. (2013). Oikeudellistuva sosiaalinen kontrolli: Esimerkkinä koulujen alttius ilmoittaa oppilaiden tekoja poliisille [Legislation of social control: Schools' inclinations to report pupils' behaviour to the police.] In Hinkkanen, & Mäenpää, L (Eds.), *Suomalainen kriminaalipolitiikka: Näkökulmia teoriaan ja käytäntöön* (pp.303 – 314). Forum Iuris. Helsinki: University of Helsinki, Faculty of Law.

Kolind, T., Demant, J., & Hunt, G. (2013). Studies in youth, drug and alcohol consumption at Centre for Alcohol and Drug Research. *Drugs: Education, Prevention and Policy*, 20(6):457–464.

Konu, A. I., & Lintonen, T. P. (2004). The misperceived social norm of drunkenness among early adolescents in Finland. *Health Education Research*, 19(1), 64–70.

Korander, T. (2014). *Rikottujen ikkunoiden nollatoleranssi. Tutkimus New Yorkin rikosentorjunnan uuskonservatiivi-mallista Suomessa* [Zero tolerance of broken windows. Research on New York's neoconservative model of crime prevention applied in Finland]. Turun yliopiston julkaisuja, sarja C osa 390. Turku: Turun yliopisto.

Korander, T., & Vanhala, A. (2003). Arviointitutkimus nuorten humalajuomisen ehkäisystä ja rikosten tilannetorjunnan rajallisuudesta [An evaluation study on the limitations to situational prevention of youth intoxication and delinquency]. *Oikeus*, 33(3), 250–277.

Kouluterveyskysely. (2017). *Kouluterveyskyselyn tulokset nuorilla 2017* [School health study results 2017]. Helsinki: Terveysten ja hyvinvoinnin laitos. Retrieved from <https://thl.fi/fi/web/lapset-ja-perheet/tutkimustuloksia/elintavat>

Kraus, L., & ESPAD Group. (2016). *ESPAD Report 2015: Results from the European School Survey Project on Alcohol and Other Drugs*. Luxembourg: Publications Office of the European Union.

Kristjansson, A. L., James, J. E., Allegrante, J. P., Sigfusdottir, I. D., & Helgason, A. R. (2010). Adolescent substance use, parental monitoring, and leisure-time activities: 12-year outcomes of primary prevention in Iceland. *Preventive Medicine, 51*(2), 168–171.

Kristjansson, A. L., Sigfusdottir, I. D., & Allegrante, J. P. (2013). Adolescent substance use and peer use: A multilevel analysis of cross-sectional population data. *Substance Abuse Treatment, Prevention, and Policy, 8*(1), 27. <https://doi.org/10.1186/1747-597X-8-27>

Kristjansson, A. L., Sigfusdottir, I. D., Allegrante, J. P., & Helgason, A. R. (2009). Parental divorce and adolescent cigarette smoking and alcohol use: Assessing the importance of family conflict. *Acta Paediatrica, 98*(3), 537–542.

Kristjansson, A. L., Sigfusdottir, I. D., Thorlindsson, T., Mann, M. J., Sigfusson, J., & Allegrante, J. P. (2016). Population trends in smoking, alcohol use and primary prevention variables among adolescents in Iceland, 1997–2014. *Addiction, 111*(4), 645–652.

Kuntsche, E., Rossow, I., Simons-Morton, B., Bogt, T. T., Kokkevi, A., & Godeau, E. (2013). Not early drinking but early drunkenness is a risk factor for problem behaviors among adolescents from 38 European and North American countries. *Alcoholism, Clinical and Experimental Research, 37*, 308–314.

Landberg, J., & Sommerland, N. (2014). Socioekonomiska skillnader och drog-användning. In A. Englund (Ed.), *Skolelevers drogvanor 2014* (pp. 116–128). Stockholm: Centralförbundet för alkohol - och narkotikaupplysning CAN.

Larm, P., Livingston, M., Svensson, J., Leifman, H., & Raninen, J. (2018). The increased trend of non-drinking in adolescence: The role of parental monitoring and attitudes toward offspring drinking. *Drug and Alcohol Review, 37*, S34–S41.

- Larm, P., Raninen, J., Åslund, C., Svensson, J., & Nilsson, K. (2018). The increased trend of non-drinking alcohol among adolescents: What role do internet activities have? *European Journal of Public Health*, cky168.
- Larm, P., Åslund, C., Raninen, J., & Nilsson, K. W. (2018). Adolescent non-drinkers: Who are they? Social relations, school performance, lifestyle factors and health behaviours. *Drug and Alcohol Review*, 37(1), 67–75.
- Latvala, A., Dick, D. M., Tuulio-Henriksson, A., Suvisaari, J., Viken, R. J., Rose, R. J., & Kaprio, J. (2011). Genetic correlation and gene-environment interaction between alcohol problems and educational level in young adulthood. *Journal of Studies on Alcohol and Drugs*, 72(2), 210–220.
- Lavikainen, H., Ahlström, S., Metso, L., Nevalainen, J., & Lintonen, T. (2008). Relationship between negative experiences and drinking experience among 15- to 16-year-old adolescents in Finland. *European Addiction Research*, 14(3), 169–178.
- Lavikainen, H. M., Lintonen, T., & Kosunen, E. (2009). Sexual behavior and drinking style among teenagers: A population-based study in Finland. *Health Promotion International*, 24(2), 108–119.
- Lavikainen, H., Salmi, V., Aaltonen, M., & Lintonen, T. (2011). Alcohol-related harms and risk behaviours among adolescents: Does drinking style matter? *Journal of Substance Use*, 16(3), 243–255.
- Leifman, H. (2014). Alkohol. In A. Englund, *Skolelevers drogvanor 2014*. Rapport nr 146. Stockholm: Centralförbundet för alkohol - och narkotikaupplysning CAN.
- Lieb, R., Merikangas, K. R., Höfler, M., Pfister, H., Isensee, B., & Wittchen, H. U. (2002). Parental alcohol use disorders and alcohol use and disorders in offspring: A community study. *Psychological Medicine*, 32, 63–78.
- Lien, N., Friestad, C., & Klepp, K. (2001). Adolescents' proxy reports of parents' socioeconomic status: How valid are they? *Journal of Epidemiology & Community Health*, 55, 731–737.
- Lintonen, T., Ahtinen, S., & Konu, A. (2018). Changes in Finnish adolescents' alcoholic beverage preferences 1999–2017. *Nordic Studies on Alcohol and Drugs*, 35(4), 304–317.

Lintonen, T., Härkönen, J., Raitasalo, K., Härkönen, T., Mäkelä, P. (2016). Decreasing adolescent drinking: Is there evidence of a continuation into future adult cohorts? APC analysis of adolescent drinking in Finland, 1983–2013. *Scandinavian Journal of Public Health*, 44(7), 654–662.

Lintonen, T., Karlsson, T., Nevalainen, J., & Konu, A. (2013). Alcohol policy changes and trends in adolescent drinking in Finland from 1981 to 2011. *Alcohol and Alcoholism*, 48(5), 620–626.

Lintonen, T., Mäkelä, P., Härkönen, J., & Raitasalo, K. (2015). Tulevat sukupolvet eivät ole raitistumassa. *Yhteiskuntapolitiikka*, 80(1), 46–53.

Lintonen, T., & Nevalainen, J. (2017). Has the role of personal income in alcohol drinking among teenagers changed between 1983 and 2013: A series of nationally representative surveys in Finland. *BMJ Open*, 7(4), e013994. <https://doi.org/10.1136/bmjopen-2016-013994>

Lintonen, T., Rimpelä, M., Ahlström, S., Rimpelä, A., & Vikat, A. (2000). Trends in drinking habits among Finnish adolescents from 1977 to 1999. *Addiction*, 95(8), 1255–1263. <https://doi.org/10.1046/j.1360-0443.2000.958125512.x>

de Looze, M., Raaijmakers, W., ter Bogt, T., Berndtsen, P. Farhat, T., Ferreira, M., ... Pickett, W. (2015). Decreases in adolescent weekly alcohol use in Europe and North America: Evidence from 28 countries from 2002 to 2010. *European Journal of Public Health*, 25(Suppl_2), 69–72.

Lundborg, P. (2007). Parents' willingness to provide alcohol and adolescents' alcohol use – Evidence from Swedish data. *Vulnerable Children and Youth Studies*, 2(1), 60–70. <https://doi.org/10.1080/17450120601130581>

Luopa, P., Kivimäki, H., Matikka, A., Vilkki, S., Jokela, J., Laukkarinen, E., & Paananen, R., (2014). *Nuorten hyvinvointi Suomessa 2000–2013. Kouluterveyskyselyn tulokset*. Raportti 25/2014. Helsinki: Terveiden ja hyvinvoinnin laitos.

Malin, M & Kinnunen, J M & Rimpelä, A (2014): Maahanmuuttajataustaisten oppilaiden elinolot, hyvinvointi ja koulumenestys. [Learning, living conditions and wellbeing among pupils with immigrant backgrounds] In Vainikainen, M. Pauliina & Rimpelä, A (eds.): *Nuorten kehitysympäristö muutoksessa – Peruskoulujen oppimistulokset ja oppilaiden hyvinvointi eriytyvällä Helsingin seudulla*. Helsingin yliopiston opettajakoulutuslaitoksen julkaisuja. Helsingin yliopiston opettajakoulutuslaitoksen julkaisuja, 2014.

Matikka, A., Luopa, P., Kivimäki, H., Jokela, J., & Paananen, R. (2013). Maahanmuuttajataustaisten 8. ja 9.-luokkalaisten hyvinvointi. Kouluterveyskysely 2013. Raportti 26/2014. Helsinki: Terveyden ja hyvinvoinnin laitos.

Monti, P. M., Miranda, R., Nixon, K., Sher, K. J., Swartzwelder, H. S., Tapert, S. F., ... Crews, F. T. (2005). Adolescence: Booze, brains, and behavior. *Alcoholism: Clinical and Experimental Research*, 29, 207–220.

Mäkelä, P. (2003). Alkoholin käyttö ja haitat lisääntyvät. *Duodecim*, 119, 2481–2487. Retrieved from <http://www.terveyskirjasto.fi/xmedia/duo/duo93990.pdf>

Mäkelä, P., Rossow, I., & Trygvesson, K. (2002). Who drinks more and less when policies change? The evidence from 50 years of Nordic Studies. In R. Room (Ed.), *The effects of Nordic alcohol policies: What happens to drinking and harm when alcohol controls change?* (pp. 13–41). Publication No 42. Helsinki: Nordic Council for Alcohol and Drug Research.

Møller, L. (2002). Legal restrictions resulted in a reduction of alcohol consumption among young people in Denmark. In R. Room (Ed.), *The effects of Nordic alcohol policies: What happens to drinking and harm when alcohol controls change?* (pp. 93–100). Publication No 42. Helsinki: Nordic Council for Alcohol and Drug Research.

Norström, T., & Pape, H. (2012). Associations between adolescent heavy drinking and problem drinking in early adulthood: Implications for prevention. *Journal of Studies on Alcohol and Drugs*, 73(4), 542–548.

Norström T, & Raninen J. (2015). Is there a link between per capita alcohol consumption and youth drinking? A time-series analysis for Sweden in 1972–2012. *Addiction*, 110(6), 967–974.

Norström, T., & Raninen, J. (2017). Drinking trajectories of at-risk groups: Does the theory of the collectivity of drinking apply? *Drug and Alcohol Review*, 37(S1), S15–S21.

Norström, T., & Svensson, J. (2014). The declining trend in Swedish youth drinking: Collectivity or polarization? *Addiction*, 109(9), 1437–1446.

Näsi, M., Junttila, N., Koivusilta, L., & Niemi, P. M. (2013). The associations between ICT and media use, alcohol consumption and loneliness among Finnish

adolescents. In T. Juuti, P. Räsänen, & O. Sarpila (Eds.), *Working papers in economic sociology: Studies of well-being and lifestyle in contemporary Finland* (pp. 67–84). Turku: University of Turku.

Obstbaum, Y. (2006). *Brottslighet bland finskspråkiga och svenskspråkiga ungdomar* [Delinquency among Swedish-speaking and Finnish-speaking youth]. Rättspolitiska forskningsinstitutets forskningsmeddelanden 69. Helsingfors: Rättspolitiska forskningsinstitutet.

Obstbaum, Y. (2018, May). The relevance of declined alcohol use for the decline in young people's delinquent behaviour? Paper presented at the 60th Research Seminar of The Scandinavian Research Council for Criminology (NSfK) in Helsinki.

Ólafsdóttir, H. (1999). The entrance of beer into a persistent spirits culture. *Contemporary Drug Problems*, 26(4), 545-575.

Ólafsdóttir, H., Gudmundsdóttir, Á, & Ásmundsson, G. (1997). The europeanization of drinking habits in iceland after the legalization of beer. *European Addiction Research*, 3(2), 59-66

Palosuo, H., Koskinen, S., Lahelma, E., Prättälä, R., Martelin, T., Ostamo, A., ... Linnanmäki, E. (Eds.). (2007). *Terveysten eriarvoisuus Suomessa. Sosioekonomisten terveyserojen muutokset 1980–2005* [The development of socioeconomic health differences in Finland 1980–2005]. Helsinki: Sosiaali- ja terveysministeriö.

Pape, H. (2009a). Recognizing or ignoring the dubious evidence base for school-based programmes. *Nordic Studies on Alcohol and Drugs*, (26)6, 548–551.

Pape, H. (2009b). School-based programmes that seem to work: Useful research on substance use prevention or suspicious stories of success? *Nordic Studies on Alcohol and Drugs*, (26)6, 521–535.

Pape, H. (2012). Young people's overestimation of peer substance use: An exaggerated phenomenon. *Addiction*, 107(5), 878–884.

Pape, H., & Bye, E. (2017). Drinking with parents: Different measures, different associations with underage heavy drinking? *Nordic Studies on Alcohol and Drugs*, 34(6), 445–455.

Pape, H., & Norström, T. (2016). Associations between emotional distress and heavy drinking among young people: A longitudinal study. *Drug and Alcohol Review, 35*(2), 170–176. <https://doi.org/10.1111/dar.12290>

Pape, H., Norström, T., & Rossow, I. (2017). Adolescent drinking – a touch of social class? *Addiction, 112*, 792–800.

Pape, H., Rossow, I., & Brunborg, G. S. (2018). Adolescents drink less: How, who and why? A review of the recent research literature. *Drug and Alcohol Review, 37*(Suppl_1), S98–114. <https://doi.org/10.1111/dar.12695>

Pape, H., Rossow, I., & Storvoll, E. E. (2009). Under double influence: Assessment of simultaneous alcohol and cannabis use in general youth populations. *Drug and Alcohol Dependence, 101*(1–2), 69–73.

Pape, H., Rossow, I., & Storvoll, E. E. (2015). Is drinking with parents associated with high-risk drinking among adolescents? *European Addiction Research, 21*(6), 291–299.

Pedersen, W. (2013). Alkoholavholdende – en risikogruppe? *Tidsskrift for Den norske legeforening, 133*(1), 33–36. <https://doi.org/10.4045/tidsskr.12.1017>

Pedersen, W., Bakken, A., & von Soest, T. (2015). Adolescents from affluent city districts drink more alcohol than others. *Addiction, 110*(10), 1595–1604.

Pedersen, W., Bakken, A., & von Soest, T. (2017). Neighborhood or school? Influences on alcohol consumption and heavy episodic drinking among urban adolescents. *Journal of Youth and Adolescence, 47*(10):2073-2087.

Pedersen, W., & Kolstad, A. (2000). Adolescent alcohol abstainers: Traditional patterns in new groups. *Acta Sociologica, 43*(3), 219–233. <https://doi.org/10.1177/000169930004300303>

Pedersen, W., & Skrandal, A. (1998). Alcohol consumption debut: Predictors and consequences. *Journal of Studies on Alcohol, 59*(1), 32.

Pettersson, C., Linden-Bostrom, M., & Eriksson, C. (2009). Parental attitudes and behaviour concerning adolescent alcohol consumption: Do sociodemographic factors matter. *Scandinavian Journal of Public Health, 37*(5), 509-517.

Pennay, A., Holmes, J., Törrönen, J., Livingston, M., Kraus, L., & Room, R. (2018). Researching the decline in adolescent drinking: The need for a global and generational approach. *Drug and Alcohol Review*, 37(Suppl_1), S115–S119.

Pennay, A., Livingston, M. & MacLean, S. (2015). Young people are drinking less: It is time to find out why. *Drug and Alcohol Review*, 34(2), 115–118.

Pirkanen, H., Simonen, J., Kataja, K., Holmila, M., & Tigerstedt, C. (2016). Vanhemmat ristiaallokossa. Perhekulttuuri ja ambivalentti alkoholikasvatus. [Parents in crossfire. Family culture and the ambivalence of alcohol in upbringing]. *Yhteiskuntapolitiikka*, 81(2), 138–149.

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, 48–68. <https://doi.org/10.1111/j.1360-0443.2008.02176.x>

Raitasalo, K. (2003). Preventing adolescents' alcohol and drug use by activating parents: Evaluation of the 'Klaari Helsinki' project. *Nordic Studies on Alcohol and Drugs (English Supplement)*, 20, 116–119.

Raitasalo, K., & Holmila, M. (2014). Alkoholien käyttötapojen periytyminen ja vanhempien kasvatuskäytännöt [The inheritance of drinking habits and parenting practices]. In J. Lammi-Taskula & S. Karvonen, (Eds.), *Lapsiperheiden hyvinvointi* (pp. 196–208). Teema 21. Helsinki: Terveyden ja hyvinvoinnin laitos, 2014.

Raitasalo, K., Huhtanen, P., & Miekka, M. (2015). *Nuorten päihteiden käyttö Suomessa 1995–2015. ESPAD-tutkimusten tulokset* [Alcohol and drug use among adolescents in Finland 1995–2015. ESPAD survey results]. Terveyden ja hyvinvoinnin laitoksen julkaisu 19. Helsinki: Terveyden ja hyvinvoinnin laitos

Raitasalo, K., & Simonen, J. (2011). Alaikäiset juovat entistä vähemmän mutta nuorten aikuisten juominen lisääntyy. *Yhteiskuntapolitiikka*, 76(1), 17–29.

Raitasalo, K., Simonen, J., Tigerstedt, C., Mäkelä, P., & Tapanainen, H. (2018). What is going on in underage drinking? Reflections on Finnish European school Survey Project on Alcohol and Other Drugs data 1999–2015. *Drug and Alcohol Review*, 37, S84.

Raitasalo, K., Tigerstedt, C., & Simonen, J. (2018). Miksi nuoret juovat vähemmän? [Why do young people drink less?] In P. Mäkelä, J. Härkönen, T. Lin-

tonen, C. Tigerstedt, & K. Warpenius (Eds.), *Näin Suomi juo. Suomalaisten muuttuvat alkoholikäyttötavat* (pp. 158–167). Helsinki: Terveystieteiden tutkimuskeskus.

Ramstedt, M., Leifman, H., Muller, D., Sundin, E., & Norström, T. (2013). Reducing youth violence related to student parties: Findings from a community intervention project in Stockholm. *Drug and Alcohol Review, 32*(6), 561–565.

Raninen, J. (2013). Berusningsdebuten sker allt senare. *Alkohol & Narkotika, 3*, 14–17.

Raninen, J. (2015). *Drinking behaviors of large groups: Studies disentangling population drinking in Sweden*. (Doctoral dissertation). Stockholm: Karolinska Institutet.

Raninen, J. (2018). Exploring the changing landscape of youth drinking: We are still drawing the map. *Drug and Alcohol Review, 37*(Suppl. 1), S6–S8.

Raninen, J., Livingston, M., Karlsson, P., Leifman, H., Guttormsson, U., Svensson, J., & Larm, P. (2018). One explanation to rule them all? Identifying subgroups of non-drinking Swedish ninth graders. *Drug and Alcohol Review, 37*, S48.

Raninen, J., Livingston, M., & Leifman, H. (2014). Declining trends in alcohol consumption among Swedish youth. Does the theory of collectivity of drinking cultures apply? *Alcohol and Alcoholism, 49*(6), 681–686.

Romelsjö, A., & Danielsson, A. (2012). Does the prevention paradox apply to various alcohol habits and problems among Swedish adolescents? *European Journal of Public Health, 22*(6), 899–903.

Rehnman, C., Larsson, J., & Andréasson, S. (2005). The beer campaign in Stockholm: Attempting to restrict the availability of alcohol to young people. *Alcohol, 37*(2), 65–71.

Rehnström, K. (2018). *Rusmedelsförebyggande insatser till föräldrar för att påverka ungas alkoholanvändning*. Presentation at Nordiska Rusmedelsdagar, Faroe Islands.

Rimpelä, A., Rainio, S., Huhtala, H., Lavikainen, H., Pere, L., & Rimpelä, M. (2007). *Nuorten terveystapatutkimus 2007. Nuorten tupakkatuotteiden ja päihteiden käyttö 1977–2007*. Selvityksiä 2007:63. Helsinki: Sosiaali- ja terveysministeriö

Rimpelä, A., Rainio, S., Pere, L., Lintonen, T., & Rimpelä, M. (2005). *Tupakkatuotteiden ja päihteiden käyttö 1977–2005. Nuorten terveystapatutkimus 2005*. Helsinki: Sosiaali- ja terveysministeriö.

Room, R. (Ed.) (2002). *The effects of Nordic alcohol policies. What happens to drinking and harm when alcohol controls change?* Publication No 42. Helsinki: Nordic Council for Alcohol and Drug Research.

Room, R. (2003). *Preventing alcohol problems: Popular approaches are ineffective, effective approaches are politically impossible*. Presentation at the 13th Alcohol Policy Conference 'Preventing alcohol problems among youth: Policy approaches', Boston, MA, March 13–16.

Room, R., & Livingston, M. (2017). The distribution of customary behavior in a population. The total consumption model and alcohol policy. *Sociological Perspectives*, 60(1), 10–22.

Rossow, I., & Norström, T. (2014). Heavy episodic drinking and deliberate self-harm in young people: A longitudinal cohort study. *Addiction*, 109(6), 930–936.

Salmi, V. (2012). *Nuorten rikoskäyttäytyminen ja uhrikokemukset 2012*. Oikeuspoliittisen tutkimuslaitoksen tutkimustiedonantoja 113. Helsinki: Oikeuspoliittinen tutkimuslaitos.

Sigfúsdóttir I. D., Thorlindsson, T., Kristjánsson, Á. L., Roe, K. M., & Allegrante, J. P. (2009). Substance use prevention for adolescents: The Icelandic model. *Health Promotion International*, 24(1), 16–25.
<https://doi.org/10.1093/heapro/dan038>

Skog, O-J. (1993). The tail of the alcohol consumption distribution. *Addiction*, 88, 601–610.

Skog, O-J. (1985). The collectivity of drinking cultures: A theory of the distribution of alcohol consumption. *British Journal of Addiction*, 80, 83–99.

Skogen, J. C., Bøe, T., Sivertsen, B., & Hysing, M. (2018). Use of alcohol, tobacco and illicit drugs among ethnic Norwegian and ethnic minority adolescents in

Hordaland county, Norway: The youth@hordaland-survey. *Ethnicity & Health*, 23(1), 43–56. <https://doi.org/10.1080/13557858.2016.1246422>

Skogen, J. C., Harvey, S. B., & Henderson, M. (2009). Anxiety and depression among abstainers and low-level alcohol consumers. The Nord-Trøndelag Health Study. *Addiction*, 104, 1519–1529.

Socialförvaltningen. (2018). *Stockholmsenkäten 2018. Urval av stadsövergripande resultat*. Stockholm: Socialförvaltningen, Avdelningen för stadsövergripande sociala frågor. Retrieved from www.stockholm.se/stockholmsenkaten

Soikkeli, M. (2010). Mitä tutkimusnäyttö kertoo alkoholimainonnan vaikutuksista lapsiin ja nuoriin? [The research evidence on the impact on alcohol advertising on children and adolescents]. *Yhteiskuntapolitiikka*, 75(5), 538–546.

Stafström, M. (2014). Influence of parental alcohol-related attitudes, behavior and parenting styles on alcohol use in late and very late adolescence. *European Addiction Research*, 20(5), 233–240.

Statens Institut for Folkesundhed. (2018a). Alkohol blandt gymnasie- og erhvervsskoleelever. Alkoholvaner, alkoholkultur og trivsel. København: Statens Institut for Folkesundhed

Statens Institut for Folkesundhet. (2018b). Nyt forskningsprojekt: Gymnasier uden druk. Retrieved from https://www.sdu.dk/da/sif/ugens_tal/40_2018 .

Storvoll, E. E., Rossow, I., Pape, H. (2010). Where do adolescents get drunk? *Nordic Studies on Alcohol and Drugs*, 27(3), 209–222.

Strandberg, A. K., & Bodin, M. C. (2011). Alcohol-specific parenting within a cluster-randomized effectiveness trial of a Swedish primary prevention program. *Health Education*, 111(2), 92–102.

Strandheim, A., Holmen, T. L., Coombes, L., & Bentzen, N. (2010). Alcohol use and physical health in adolescence: A general population survey of 8,983 young people in north-trøndelag, norway (the young-HUNT study). *Substance use & Misuse*, 45(1-2), 253-265.

Sulkunen, P., Rantala, K., & Määttä, M. (2004). The ethics of not taking a stand. Dilemmas of drug and alcohol prevention in a consumer society: A case study. *International Journal of Drug Policy*, 15(5–6), 427–434.

Sundhedsstyrelsen. (2018a). Undersøgelse af alkoholpolitik på gymnasier og erhvervsskoler i Danmark, september 2018. Analyseinstituttet MEGAFON. København: Sundhedsstyrelsen.

Sundhedsstyrelsen. (2018b). 'Meget mere med.' Kampagne til unge om alkohol. Retrieved from <https://www.sst.dk/da/nyheder/2018/ungdomsuddannelser-bakker-op-om-alkoholkodeks>

Sundhedsstyrelsen og Statens Serum Institut. (2015). *Alkoholstatistik 2015. Nationale data*. København: Sundhedsstyrelsen.

Svensson, J. (2013). Alcohol consumption and alcohol-related harm among young people: Studies of the recent experience in Sweden. Stockholm: Karolinska Institutet.

Svensson, J., & Andersson, D. (2016). What role do changes in the demographic composition play in the declining trends in alcohol consumption and the increase of non-drinkers among Swedish youth? A time-series analysis of trends in non-drinking and region of origin 1971–2012. *Alcohol and Alcoholism*, 51(2), 172–176.

Svensson, J., & Landberg, J. (2013). Is youth violence temporally related to alcohol? A time-series analysis of binge drinking, youth violence and total alcohol consumption in Sweden. *Alcohol and Alcoholism*, 48(5), 598–604.

Svensson, M. (2010). Alcohol use and social interactions among adolescents in Sweden: Do peer effects exist within and/or between the majority population and immigrants. *Social Science & Medicine*, 70(11), 1858–1864. <https://doi.org/10.1016/j.socscimed.2010.01.046>

Svensson, M., & Hagquist, C. (2010). Adolescents' alcohol-use and economic conditions: A multilevel analysis of data from a period with big economic changes. *European Journal of Health Economics*, 11(6), 533–541. <https://doi.org/10.1007/s10198-009-0209-7>

Takala, J-P., & Obstbaum, Y. (2009): *Looking at violence in the Nordic countries: Statistical sources, variations, improving measurement*. TemaNord. Copenhagen: Nordic Council of Ministers.

Thomsen, S. R., & Rekve, D. (2004). Television and drinking expectancies. The influence of television viewing on positive drinking expectancies and alcohol use

among US and Norwegian adolescents: A comparative analysis. *Nordisk alkohol- & narkotikatidskrift, English Supplement*, 21, 29–52.

Thor, S. (2017a). Konsekvenser av alkoholbruk. In S. Thor, (Ed.), *Skolelevers drogvanor 2017* (pp. 25–28). Rapport 170. Stockholm: Centralförbundet för alkohol - och narkotikaupplysning CAN.

Thor, S. (Ed.). (2017b). *Skolelevers drogvanor 2017*. Rapport 170. Stockholm: Centralförbundet för alkohol - och narkotikaupplysning CAN.

Thor, S., Raninen, J., & Landberg, J. (2017). More drinking, more problems: Stable association between alcohol consumption and harm among Swedish youth 1995–2012. *Alcohol and Alcoholism*, 52(3):358–536.

Thorlindsson, T., & Bernburg, J. G. (2006). Peer groups and substance use: Examining the direct and interactive effect of leisure activity. *Adolescence*, 41(162), 321–339.

Thorlindsson, T., Valdimarsdottir, M., & Hrafn Jonsson, S. (2012). Community social structure, social capital and adolescent smoking: A multi-level analysis. *Health and Place*, 18(4), 796–804.

Torikka, A., Kaltiala-Heino, R., Luukkaala, T., & Rimpelä, A. (2017). Trends in alcohol use among adolescents from 2000 to 2011: The role of socioeconomic status and depression. *Alcohol and Alcoholism*, 52(1), 95–103.

Torikka, A., Kaltiala-Heino, R., Rimpelä, A., Rimpelä, M., & Rantanen, P. (2001). Depression, drinking, and substance use among 14- to 16-year-old Finnish adolescents. *Nordic Journal of Psychiatry*, 55(5), 351–357.

Tutenges, S., & Rod, M. H. (2009). 'We got incredibly drunk ... it was damned fun': Drinking stories among Danish youth. *Journal of Youth Studies*, 12(4), 355–370.

Vedøy, T. F., & Skretting, A. (2009). *Ungdom og rusmidler. Resultater fra spørreskjemaundersøkelser 1968–2008*. SIRUS-Rapport nr. 5/2009. Oslo: Statens institutt for rusmiddelforskning (SIRUS).

Velleman, R., & Templeton, L. (2007). Understanding and modifying the impact of parents' substance misuse on children. *Advances in Psychiatric Treatment*, 13(2), 79–89.

Virtanen, P., Nummi, T., Lintonen, T., Westerlund, H., Hägglöf, B., & Hammarström, A. (2015). Mental health in adolescence as determinant of alcohol consumption trajectories in the northern Swedish cohort. *International Journal of Public Health, 60*(3), 335–342.

Vladimirov, D., Niemelä, S., Auvinen, J., Timonen, M., Keinänen-Kiukaanniemi, S., Ala-Mursula, L., ... Miettunen, J. (2016). Changes in alcohol use in relation to sociodemographic factors in early midlife. *Scandinavian Journal of Public Health, 44*(3), 249–257. <https://doi.org/10.1177/1403494815622088>

Wikström, K., Lindström, J., Halme, N., & Laatikainen, T. (2017). *Ulkomaalais-taustaisten nuorten päihteiden käyttö ja rahapelien pelaaminen*. Tutkimuksesta tiiviisti 35. Helsinki: Terveyden ja hyvinvoinnin laitos.

Youth in Iceland. (2018). Website of the Icelandic Centre for Social Research and Analysis (ICSRA). <http://www.rannsoknir.is/en/about/>

Øia, T. (2013). *Ungdom, rus og marginalisering*. Oslo: Cappelen Damm.

Øia, T., & Vestel, V. (2014). Generasjonskløfta som forsvant. Et ungdomsbilde i endring. *Tidskrift for ungdomsforskning, 14*(1), 99–103.

Österberg, E., & Karlsson, T. (2011). Trends in alcohol consumption and violence in the Nordic countries 1960–2000: Exploring some puzzles. *Contemporary Drug Problems, 38*(2), 311–329. <https://doi.org/10.1177/009145091103800207>

Østergaard, J. (2007). Mind the gender gap! When boys and girls get drunk at a party. *Nordisk alkohol- & narkotikatidskrift, 24*(2), 127–148.

Østergaard, J. (2009). Learning to become an alcohol user: Adolescents taking risks and parents living with uncertainty. *Addiction Research & Theory, 17*(1), 30–53.

Personal communications:

Jónsson, S H (2018, May): Personal communication

10 Appendices

Appendix 1 Main survey studies on adolescent and youth drinking in the Nordic states.

Denmark

The ESPAD study, <https://www.sdu.dk/da/sif/forskning/projekter/espad>

The HBSC study <http://www.hbsc.org/membership/countries/denmark.html>

Ungeprofilundersøgelsen Is a survey instrument used by a number municipalities as a collaboration with Aarhus University and carried out last in 2015: <https://www.skolesundhed.dk/Files/CMS/Ungeprofilunders%C3%B8gelse%202015.pdf>
<https://www.skolesundhed.dk>

Denmark also has ongoing surveys for the age-group 15-29 year olds⁵⁹
YODA: The project is a longitudinal study concerning substance use (measurements 2005, 2008 and 2015), encompassing surveys (for both parents and young people) and register data as well as qualitative interviews
https://pure.sfi.dk/ws/files/1215865/Unge_alkohol_og_stofer_Jarvinen_2018.pdf
<https://www.soc.ku.dk/Forskning/projektoversigt/yoda/>

Ung Map is set of questions concerning psychological, physiological and social resources. The latest is from 2015. <http://psy.au.dk/forskning/forskningscentre-og-klinikker/center-for-rusmiddelforskning/ungmap/>

Finland

The ESPAD study, <https://thl.fi/fi/tutkimus-ja-kehittaminen/tutkimukset-ja-hankeet/espac>

The HBSC study <http://www.hbsc.org/membership/countries/finland.html>

The school health study (Kouluterveyskysely) <https://thl.fi/en/tutkimus-ja-kehittaminen/tutkimukset-ja-hankeet/kouluterveyskysely>

⁵⁹ For older young people see. Den Nationale Sundhedsprofil (16-24 years) and Rusmidler i Danmark (15-29 years). (Sundhedsstyrelsen 2015)

The Adolescent Health and Lifestyle survey(NTH Nuorten terveystapatutkimus,) http://www.uta.fi/hes/tutkimus/tutkimusryhmat/Kansanterveystiede/Nuorten_terveystapatutkimus.html

The Jyväskylä Longitudinal study <https://www.jyu.fi/edupsy/fi/laitokset/psykologia/en/research/research-areas/longitudinal-studies/jyls>

A drinking habits study is conducted every 8 years, and has some information on young people <https://thl.fi/en/tutkimus-ja-kehittaminen/tutkimukset-ja-hankkeet/juomatapatutkimus>

Iceland

The ESPAD study, <http://www.espad.org/country/iceland>

The HBSC study <http://www.hbsc.org/membership/countries/iceland.html>

Youth in Iceland (ICSRA) <http://www.rannsoknir.is/en/home/>

Norway

The ESPAD study, <https://www.fhi.no/en/cristin-projects/ongoing/youth-and-drug-use---espad/>

The HBSC study <http://www.hbsc.org/membership/countries/norway.html>

Ung I Oslo, Ungdata: <http://www.ungdata.no/>

Nord Trøndelag Health study, longitudinal study. It is a database of questionnaire data, clinical measurements and samples from a county's inhabitants from 1984 onwards.

Sweden

The ESPAD study, <https://www.can.se/Publikationer/rapporter/espad-i-sverige/>

The HBSC study <http://www.hbsc.org/membership/countries/sweden.html>

Skolelevers drogvanor, <https://can.se/Undersokningar/Skolelevers-drogvanor1/>

11 Expert Team

Vibeke Asmussen Frank, Center for Rusmiddelforskning, Aarhus universitet, Danmark

Elin Bye, Folkehälsainstitutet, Norge

Stefán Hrafn Jónsson, Islands universitet, Island
Hilde Pape, Folkehälsainstitutet, Kriminalvårdens utdanningscenter, Norge

Kirsimarja Raitasalo, Institutet för hälsa och välfärd, Finland

Jonas Raninen, Centralförbundet för alkohol- och narkotikaupplysning, CAN Sverige

Kerstin Stenius, Nordens välfärdscenter

Christoffer Tigerstedt, Institutet för hälsa och välfärd, Finland

The Nordic Welfare Centre wishes to thank the Nordic Public Health arena for funding this important project. The project wished to thank the Nordic expert as well as Anders Bakken, Christina Viskum Lytken Larsen and Jeanette Østergaard and the many experts and researchers and colleagues who have provided information for the report. We also thank Pia Pörtfors for the literature search, Kerstin Stenius for comments on the draft of the report, Pirkko Hautamäki for thorough proofreading of the language, Jessica Gustafsson for providing support for practical details, as well as Nina Karlsson, Tina Rehnström and Erika Lehtonen

11.1 Project Manager (Nordic Welfare Centre)

Yaira Obstbaum

Nordic Welfare Centre
Box 1073, SE-101 39 Stockholm
Visiting address: Drottninggatan 30
Phone: +46 8 545 536 00
info@nordicwelfare.org

Nordic Welfare Centre
c/o Folkhälsan
Visiting address: Topeliusgatan 20
FI-00250 Helsingfors
Phone: +358 20 741 08 80
info@nordicwelfare.org