Comparative monitoring of alcohol epidemiology across the EU

Baseline assessment and suggestions for future action. Synthesis report.

RARHA
REDUCING ALCOHOL RELATED HARM

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Title: **COMPARATIVE MONITORING OF ALCOHOL EPIDEMIOLOGY ACROSS THE EU. BASELINE ASSESSMENT AND SUGGESTIONS FOR FUTURE ACTION. SYNTHESIS REPORT.**

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Table of contents

Introduction

Background

In addition to their scientific value and practical significance alcohol surveys seem to have symbolic meaning reflecting public concern about alcohol related harm. The first surveys on drinking patterns and problems in general populations were initiated in Nordic countries almost seventy years ago, when these countries were still in the shadow of their prohibition experiences of the interwar period and in search of more pragmatic policies. Countries of Central Europe started their alcohol surveys in the 1960s and 1970s, when it became clear that alcoholism would not disappear in the new socialist societies and that a comprehensive policy is needed to address alcohol related problems. In the last two decades of the 20th century, alcohol surveys were launched in the remaining European countries, including wine-producing areas in Southern Europe where alcohol was eventually recognised as an important public health problem. Finally, they appeared in Eastern Europe in countries that re-emerged after the disintegration of the Soviet Union and that suffered severe mortality crises in the 1990s, in which the role of alcohol consumption was considered paramount.

Investment in alcohol population surveys suggests that relevant national and local authorities acknowledge the utility of survey data for monitoring trends in alcohol consumption and their alcohol policies. The surveys offer numerous data which are not available in routine statistics, such as the distribution of alcohol consumption and related harm across gender, age, social class, place of residence size and region. Moreover, they allow for careful investigation of a relationship between individual consumption levels as well as drinking patterns and the number of problems generated by individual drinking. They may throw light on a range of problems suffered by individuals and communities due to others' drinking. Eventually, alcohol surveys may collect information on public support for different alcohol policies which is crucial for their democratic framing and implementation.

Despite the growing national interest in monitoring alcohol and related harm, the European Commission seemed to be reluctant to recognise the necessity of more co-ordinated action including systematic data collection on alcohol, except for a few rudimentary statistical data placed among major health determinants. It was in contrast to its concern with drug problems which led to the establishment in the early 1990s of a special European agency serving these purposes – European Monitoring Centre on Drugs and Drug Addiction. Since then EMCDDA has developed a system which brings together comparable data on (illicit) drugs not only within the European Union but also in neighbouring countries. Important segments of this system constitute general population drug surveys which are carried out every four years in all Member States, and more recently the European School Project on Alcohol and Drugs (ESPAD) carried out among school children in more than 30 European countries.

For decades alcohol, from the perspective of the European Commission, was considered first of all an important product of great economic significance offering employment and other economic gains from alcohol production, trade, retail distribution, hospitality industries, advertising and media. In addition to budget revenues in individual countries, alcohol is economically important for the whole European Union as the EU is the biggest producer, consumer, exporter and importer of alcohol world-wide and alcohol secures its trade balance surplus.

Without clear encouragement at the EC level, individual European countries tended to elaborate survey instruments which seemed best suited to their national methodological traditions, national drinking cultures and political purposes. All these survey efforts meant advances in knowledge and often more pragmatic alcohol policies. Due to the variety of methodologies, however, numerous national surveys appeared to be of little utility for monitoring alcohol epidemiology in a comparative manner. As concluded in the WHO publication: "Perpetuating the *status quo* in this field, that is, spending resources on hundreds of national alcohol surveys which offer limited scope for international comparisons, is neither cost–effective nor helpful for monitoring progress towards common aims such as those of the EU strategy to support member states in reducing alcohol-related harm. A move towards the use of common instruments, such as the questionnaire developed in the SMART project, would be crucial for methodological advance and would, over time, reduce the costs of monitoring at both national and international level. An EU-wide or European drinking survey to gather comparable baseline information would be a necessary first step to encourage Member States to adopt common methodology." (Anderson, Møller, and Galea 2012).

In contrast to the World Health Organisation which had already put alcohol on its public health agenda in 1980, in its Health for All programme, the first EU alcohol strategy was not launched until 2006. The strategy had an important symbolic meaning but did not call for the application of evidence-based policies which could affect the economic interests of numerous European stakeholders. However, in the course of its implementation, the Commission allocated significant resources to alcohol research, including a 2007 call for the development of standardised comparative surveys on alcohol. In response a project, Standardised Measurement of Alcohol-Related Troubles – SMART, was submitted and granted. Ten EU countries participated representing different drinking cultures and research traditions: the Czech Republic, Estonia, Finland, Germany, Hungary, Italy, Ireland, Poland, Spain and the United Kingdom. The project aimed to develop a standardised comparative survey methodology on alcohol consumption, heavy/binge drinking, drunkenness, context of drinking, alcohol dependence and unrecorded alcohol as well as public support for alcohol policy. After discussing different methodological strategies, scientists representing participating countries agreed not to invent an entirely new survey instrument but rather to use existing survey approaches, taking into account all their advantages and limitations, among them a question concerning how common different approaches were across countries. To this end, a literature review was conducted (Bloomfield, Hope, Kraus 2013) as well as a review of European drinking surveys (Sierosławski, Foster, Moskalewicz 2013). Eventually, a survey instrument was adopted which included approaches and questions that were considered methodologically sound and most commonly used across Europe. That instrument, called SMART questionnaire, was pilot-tested on purposive/quota samples of 200 adult inhabitants in nine participating countries while Ireland completed a national representative sample using most of the SMART questions. Most questions were found to work well in varying cultural settings. The pilot survey experiences, including focus group discussions, were summarised and published in a detailed guidebook to encourage and facilitate subsequent comparative alcohol survey initiatives (Moskalewicz, Sierosławski 2010). In addition, two more journal articles appeared that presented the detailed results of the qualitative SMART results (Thickett et al. 2013) as well as a literature review on public support for alcohol policies (Moskalewicz et al 2013). Since then several countries have applied SMART methodology, including Ireland again, Latvia, Poland and Serbia. The next impetus for further development in this area came once more from the European Commission that launched the first ever Joint Action on Alcohol where the lion's share of funds was designated for a European comparative alcohol survey. This funding priority reflected demand from the Committee on National Alcohol Policy and Action that represented Member States in their communication with the European Commission. The next survey was intended to be based on the experiences of the SMART survey, but carried out on national samples of the adult population.

References

Anderson, P., Møller, L. and Galea, G. (eds) (2012) *Alcohol in the European Union. Consumption, harm and policy approaches*, WHO Regional Office for Europe, Copenhagen

Bloomfield, K., Hope, A., Kraus L. (2013) Alcohol survey measures for Europe: A literature review. *Drug. Educ. Prev. Polic*. 20,5, 348–360.

Moskalewicz J., Sierosławski J. (2010): *Drinking population surveys –guidance document for standardized approach. Final report prepared for the project Standardizing Measurement of Alcohol-Related Trouble – SMART*. Institute of Psychiatry and Neurology, Warsaw.

Moskalewicz J., Wieczorek Ł., Karlsson T., Österberg E. (2013): Social support for alcohol policy: literature review. *Drug. Educ. Prev. Polic*. 20,5, 361–374.

Sierosławski J., Foster J., Moskalewicz J. (2013): Survey of European drinking surveys. Alcohol survey experiences of 22 European countries. *Drug. Educ. Prev. Polic*. 20,5, 383–398.

Thickett A., Elekes Z., Allaste A., Kaha K., Moskalewicz J,., Kobin M., Thom B. (2013): The meaning and use of drinking terms: contrasts and commonalities across four European countries. *Drug. Educ. Prev. Polic*., 20,5, 375–382.

Aims

The Joint Action on Reducing Alcohol Related Harm (RARHA) coordinated by the Portuguese governmental agency SICAD (General Directorate for Intervention on Addictive Behaviours and Dependencies) was launched in January 2014. It consisted of three core work packages:

WP4 – strengthening the monitoring of drinking patterns and alcohol related harm across EU countries;

WP5 – good practice principles in the use of drinking guidelines to reduce alcohol related harm;

WP6 – good practice (in primary prevention) tool kit.

This document will present results achieved by WP4 which was led by the Polish governmental agency PARPA (The State Agency for the Prevention of Alcohol-Related Problems) and co-led by the German IFT (Institute for Therapy Research).

WP4 had two objectives:

- providing a baseline for comparative assessment and monitoring of alcohol epidemiology, including drinking levels and patterns and alcohol related harms across the EU;
- strengthening capacity in comparative alcohol survey methodology and increasing interest in using common methodology in the future.

Two tasks to achieve the objectives were adopted:

- task 1 – a common alcohol survey methodology to be elaborated and implemented using as blueprint the survey instrument developed and tested for cross-cultural applicability in EU-funded project SMART;
- task 2 – data from surveys carried out in the years 2008–2013 to be pooled and recoded for comparative assessment.

Output:

Synthesis report: baseline epidemiological assessment of drinking patterns and harm across the EU and suggestions for a system of comparative monitoring of alcohol epidemiology across the EU. Task 1, i.e. results of a standardised European alcohol survey – RARHA SEAS will be presented in part A of this report, while task 2, i.e. results of comparative assessment of national surveys carried out in the years 2008–2013 will be described in part B of this report.

Expected long-term outcomes:

- Alcohol policy based on sound and comparative assessment at national and European levels;
- EEA-wide monitoring system based on a standardized survey instrument.

Part A

STANDARDISED EUROPEAN ALCOHOL SURVEY, (RARHA SEAS)

A1. Participating countries

As can be seen from the figure below, RARHA SEAS countries are spread all over Europe from Finland located at the most eastern corner of EU to Portugal and Spain – in its western part, from Greece in the south to Iceland in the north. All in all the survey was carried out in 19 EU/EEA countries representing different drinking cultures and survey traditions. Among RARHA SEAS partners there were all Nordic countries, Estonia, Lithuania and Poland along north-eastern EU borders, Romania and Bulgaria at EU south-eastern borders, inland Austria and Hungary with their centuries long history of a common statehood, Mediterranean countries such as Croatia, Greece, Italy, France and Spain and finally "Atlantic" countries i.e. Portugal and UK. Unfortunately, several countries, mostly from central Europe, are missing such as the Czech Republic, Slovakia, Germany, Lichtenstein, Switzerland, Benelux, and three countries located on islands, namely Ireland as well as Cyprus and Malta.

Fortunately, all major traditional drinking cultures are present including beer, wine and spirits drinking countries. The RARHA SEAS will show to what extent these traditional beverage preferences are preserved and to what extent European homogenisation of life styles have also affected drinking patterns.

Figure A1.1. RARHA SEAS partners

A2 Methods

A2.1. SURVEY INSTRUMENT

RARHA SEAS questionnaire constitutes an elaborated version of the SMART instrument that was pilot tested in ten European countries five years earlier. Lessons from that study were summarised in a number of journal articles as well as in an autonomous publication (Moskalewicz, Sierosławski 2010) where the final version of the alcohol survey instrument for comparative purposes was proposed.

The current RARHA SEAS questionnaire (annex 1) emerged in the course of the RARHA project as a result of the collective effort of partners from 20 European jurisdictions. It is available in 25 language versions and consists of seven sections that investigate major aspects of alcohol epidemiology and culture:

- Alcohol consumption
- Risky single occasion drinking
- Context of drinking
- Unrecorded alcohol supply
- Individual harm
- Harm from others
- Attitudes
- Socio-demographics

The section on alcohol consumption applies an approach called Beverage Specific Quantity Frequency (BSQF) which asks about annual frequency and usual quantity of drinking of beer, wine and spirits with an option for additional beverages. The BSQF approach offers an opportunity to calculate annual consumption of individual beverages as well as total annual alcohol consumption. This section includes also a question on annual frequency of drinking of any alcoholic beverage to overcome a shortcoming of the BSQF approach, which fails to grasp the generic frequency of drinking. In addition to data on frequency of drinking in general (that may differ from frequencies of drinking of individual beverages) this question offers data on life-long abstainers and people abstaining for the past 12 months.

To supplement data on usual drinking with "unusual" drinking occasions, a section on Risky Single Occasion Drinking (RSOD) or heavy episodic drinking or binge drinking was introduced. It was assumed that drinking 40 grams of 100% alcohol or more per woman and 60 grams or more per man constitutes a threshold of RSOD or heavy episodic drinking. This section begins with a question on maximum volume of alcohol drunk in the past 12 months. Those who confirmed drinking at the RSOD level or above were asked about annual frequency of drinking. Moreover, an optional question followed on frequency of drinking 80/120 grams of 100% alcohol to investigate more precisely the range of the risky single occasion drinking. Of course, the above thresholds in grams were translated in each country into relevant units that could be well understood by respondents representing different drinking cultures. This section aims at estimating not only the prevalence of RSOD but also the volume of binge drinking and its share in overall alcohol consumption.

The context of drinking may be an important factor as regards the risks of acute consequences of drinking. To study this issue a number of questions explored the context of both usual drinking and RSOD in terms of their annual frequency. The following types of context were considered: drinking with a meal, drinking place (at home, on-premise, outdoors) and drinking company.

The section on unrecorded alcohol supply aimed at measuring the prevalence of using unrecorded sources of alcohol and eventually at estimating the share of unrecorded alcohol in overall consumption. This section was considered optional. As sources of unrecorded alcohol and its legal status differ across Europe, partners who decided to apply it had freedom to formulate culture-specific questions and were expected to standardise results so as to offer data on prevalence and volumes acquired from unrecorded sources in the previous 12 months for three basic alcohol beverages.

Individual harm for a drinker was studied mainly by a short four-item screening instrument called Rapid Alcohol Problems Screening Test (RAPS), that may identify symptoms of having alcohol mental disorders. In addition, a more extended instrument, taken from the Composite International Diagnostic Interview, measuring both alcohol dependence and alcohol abuse, was applied optionally to test sensitivity and specificity of RAPS in population surveys. Alcohol CIDI section has 16 symptomatic questions including six that could be regarded as indicators of individual negative consequences of drinking.

Issues of harm from others constituted an important and innovative part of the questionnaire. It began with a series of questions on experiences with heavy drinkers in the family during childhood and adolescence; some of the more detailed questions were optional. Then questions followed on heavy drinker(s) in the respondent's life, including household members, family members outside the household, work or school mates and neighbours. Finally, eight questions on harm from others investigated different types of harm ranging from being woken up at night because of someone else's drinking to being involved in a traffic accident. For all these harms a question was asked on the extent of being negatively affected. Exploring issues of harm from others is of interest from a scientific perspective but also may be of crucial importance for a public debate on alcohol policy, in the same way that concepts of involuntary or passive smoking had an impact on the debate on tobacco and health.

Attitudes and opinion on alcohol policy were measured by 12 questions (including one optional) on consent to different alcohol policy options, ranging from extremely liberal opinions that alcohol is a product as any other not requiring any restrictions, to opinions in favour of alcohol control measures such as a ban on advertising, restrictions on alcohol availability and affordability. The composition of this section not only produces information on different opinions, but also allows us to identify attitudes, in other words, willingness or readiness to accept different alcohol policy options in favour either of alcohol control or a laissez faire approach.

A2.2. Sampling and mode of administration

All participating countries drew national general population samples only, except for Spain, which participated as a sole country but has contributed with two samples, one coverting the whole Spanish territory and another one covering the Spanish Autnonomous Community of Catalonia (ACC), the latter including the corresponding national sample quota in the ACC plus an additional number of interviews[1].

The definition of target population was more or less common for all surveys which sampled inhabitants in the country in the age range 18–64 even though some countries extended their sample to 65 years. The sampling frame was dependent on the data collection method. In the case of phone interview, the sampling frame constituted registries of phone numbers, including mobile and landlines. In the case of personal interview approaches, various registries of administrative units, households addresses and so on, were used as a sampling frame. Groups excluded from sampling frames like the homeless, people not having a phone or people living in institutions differed from country to country.

The sampling method was not standardised although random representative sampling had to be aimed at. The country specific approach was the only one possible due to differences in the data collection approaches prevailing in the different countries.

The sampling approach and sampling procedures applied are presented in table A2.2.1.

Randomized sample selection was applied in all countries, but the sampling procedures were country specific. Most commonly, multistage stratified probability sampling was applied in 11 countries. In 7 countries the sample was drawn using a simple random design. One country used stratified random sampling and several used random sampling with a quota approach component.

In the countries which used a stratified sample design, stratification was made mainly according to gender, age groups, region and size of localities.

[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

Table A2.2.1. Sampling procedures

	Sample type	Sampling procedure
Austria	Multistage sampling design	Firstly, sample points were randomly selected, with at least one sample point in each administrative district. In districts with large populations more than one sample point was selected (up to 7 sample points). Starting from each sample point addresses were again randomly selected. Within a household people were selected using the "last birthday method". The sampling of online interviews was based on an existing online panel consisting of 20.000 people.
Bulgaria	Multistage stratified sample	The first step was to sample starting points. The applied method for the selection of the starting points was "blind stab". Random walk procedure was used to select households while the method for selection of respondents was the "last birthday" method.
Croatia	Two-stage stratified random sample	First, regional strata were defined with four categories of size of place of residence for each strata. Then the required number of localities and random starting points within each locality were sampled. Finally, households were selected using random walk method. Quota selection of respondents within sampled household by age and gender was applied.
Denmark	Simple random sample	The sample was drawn by Statistics Denmark using the Danish Civil Registration System.
Estonia	Random sample	The sample was drawn from records of the Population Register. People who did not have a contact phone number (landline or mobile) were not eligible.
Finland	Random-quota sample	Three different directive quotas were used: gender, geographical location, 3 age groups. Random selection of individuals from the telephone number registry was made. The province of Åland Isles and those who have forbidden the use of their telephone numbers in marketing / marketing research activities as well as persons using only prepaid mobile telephone numbers were not covered.
France	Multistage random sample	Sample made up of 40% of landline telephone and 60% of mobile phone. The numbers of landline and mobile telephone are randomly generated and validated. Random selection of respondent within a household was applied.
Greece	Multistage random sample	From each administrative region, within each level of urbanization, a sample of primary sampling units (PSUs) was selected with a probability proportional to a measure of size. The sampling frame was landline telephone directory. An additional 1249 numbers were generated though random digit dialling. An at-home respondent was selected within each sampled household according to some fixed quota criteria.
Hungary	Two-stage stratified design	For the first sampling stage selection of the primary sample units (PSU) was performed, which were localities Stratification was made on the basis of 4 dimensions: (1) region (NUTS-2), (2) type and size of settlement, (3) gender and (4) age groups. Within the settlements selection of individuals was made by strata using simple random sample method (SRS).

	Sample type	Sampling procedure
Iceland	Random sample	Half of the sample was drawn from the National Registry of Icelanders, the other half from Gallup Panel – a panel of 24000 respondents, originally recruited by telephone from the National Registry of Icelanders. Both samples are considered to be adequately representative of the Icelandic population.
Italy	Random sample	Mobile number generation and filtering was carried out automatically by our software system (cloudresearch.it).
Lithuania	Multi-staged stratified probability sampling	Firstly three strata according to the type of place of residence were distinguished: (1) the biggest cities, (2) regional centres, and (3) rural areas. Then points were selected. In the form of ordinary probability sampling, streets were selected in each sampling point (city/ town/ rural area). Every second house was visited, 2 flats from each house were chosen using random numbers' chart. Respondent in a household was selected applying last birthday rule.
Norway	Simple random sample	The database used to draw samples for telephone interviews aims at including all individuals living in Norway over the age of 15 years who have access to a land-line or mobile telephone (or both).
Poland	Multi-staged stratified probability sampling	The strata were defined by region and size of locality. Households were selected randomly from the register of addresses. Respondents were selected randomly using Kish grid.
Portugal	Multi-stage sample design involving stratification and cluster sampling	Random proportional selection of primary sampling units (municipalities) and secondary sampling units (area segments within municipalities) was made. The selection of the ultimate sampling units was carried out using a random selection of households, afterwards using tables of random numbers in order to select the individuals.
Romania	Stratified random sample	Stratification by age group, gender and type of locality, and phone operator was applied. The computer dials telephone numbers at random, after providing the telephone operator code.
Spain*	National sample. Multistage, stratifying sampling design	Sample was stratified within each Autonomous Community by population size, age and gender. Then sampling points were randomly drawn. Random Route for households selection and quotas for individual selection were applied.
Spain-Catalonia	Sample of the Autonomous Community of Catalonia. Multistage, stratifying, sampling design	Sample was stratified by population size of a locality, age and gender. Then sampling points were randomly drawn. Random Route for households selection and quotas for individual selection were applied.
Sweden	Non-stratified random sample	Two samples were randomly drawn from the population register: one for females and one for males.
UK	Simple random sample	The sample was generated solely by random sampling using the dialler system; this uses landline telephone numbers and a call algorithm to ensure that phone numbers are selected randomly and called a maximum of 7 times over different days/times of day to increase the likelihood of making contact.

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The sample sizes are listed in table A2.2.2. Assumed minimum sample size was 1500. Most surveys had at least 1500 respondents, among them were 4 with samples surveys exceeding 2000 (Austria, Bulgaria, Estonia, and Hungary). Only samples from Spain-Catalonia, UK and Iceland were significantly smaller than 1500.

Table A2.2.2. Sample size

	Unweighted sample size	Weighted sample size*
Austria	3406	3093
Bulgaria	3000	3000
Croatia	1500	1500
Denmark	1575	1575
Estonia	2153	2153
Finland	1500	1500
France	1701	1701
Greece	1519	1519
Hungary	2005	2005
Iceland	873	873
Italy	1468	1468
Lithuania	1513	1513
Norway	1493	1493
Poland	1555	1555
Portugal	1500	1500
Romania	1500	1500
Spain**	1645	1645
Spain-Catalonia	661	661
Sweden	1624	1624
UK	1046	1049
Total	33237	32927

* Weighting was carried out so as to save original sample size. Therefore the weighted sample sizes do not differ from unweighted ones. Small differences are noted in Austria only, because the weighting procedure not only adjusted the differences related to implementation of the survey but also reduced overrepresentation of young people foreseen in sampling procedure. Difference of three interviews in UK is due to roundings.

** Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

No standard approach was adopted as regards mode of administration. As shown in table A2.2.3 half of the surveys applied computer assisted telephone interviews (CATI), in seven surveys interviews were carried out face to face but computer assisted (CAPI) and one survey applied paper and pencil approach only. In a few countries more than one mode was applied, including Austria where three modes were utilised (CAPI, paper and pencil and on-line), Denmark where CATI approach was combined with on-line self-administered interviews and Sweden where interviews were self-administered either by regular post or on-line. In Iceland an on-line approach was adopted. Only those who insisted were interviewed by telephone (CATI).

It is worthwhile stressing that personal interviews as well as on-line self-administered interviews had substantially higher response rates compared to telephone interviews.

The Austrian team compared results of personal and on-line interviews and found that on-line interviews were completed by younger and more educated respondents. Nevertheless, no significant differences were identified, and this was even more so after controlling for age and education.

Table A2.2.3. Mode of administration and response rate

	Mode of administration	Response rate – RR (%)
Austria	CAPI Paper and pencil On-line	32.1 50.9
Bulgaria	Paper and pencil	75.0
Croatia	CAPI	50.6
Denmark	CATI On-line	52.5
Estonia	CATI	60.4
Finland	CATI	11.5 (RR) 29.8 (COOP)
France	CATI	44.5
Greece	CATI	27.0 (RR) 31.3 (COOP)
Hungary	CAPI	43.0 (RR) 53.0 (COOP)
Iceland	On-line	47.7
Italy	CATI	8.7
Lithuania	CAPI	35.0
Norway	CATI	12.0 (RR) 35.0 (COOP)
Poland	CAPI	63.6
Portugal	CAPI	61.0

	Mode of administration	Response rate – RR (%)
Romania	CATI	31.0
Spain*	CAPI	50.3
Spain-Catalonia	CAPI	51.1
Sweden	Regular post On-line	35.9
UK	CATI	15.0

Note:
CAPI – computer-assisted personal interview
CATI – computer-assisted telephone interview
RR – response rate
COOP – co-operation rate

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

A2.3. Data processing

As CAPI or CATI was the method of data collection most often used, data entry was done automatically. In the countries where data were collected using pen and paper techniques, the data were entered manually.

Data cleaning was done at the level of national data bases. The data cleaning procedure included checking ranges of the variables and the logic consistency of related variables. Firstly errors were identified and listed and then checked case by case with data sources by national investigators. In the second step, the remaining errors and inconsistencies were corrected by a special computer programme designed for this purpose. The general strategy was to save as much data as possible. Several assumptions were made when developing this program concerning reasons for inconsistency. For instance, if a respondent reported frequency of drinking of 6 drinks but his maximum number of drinks was lower, the latter one was set to 6 drinks. When reasonable assumption was not possible, the erroneous value of the variable was set to missing.

The frequency scale commonly used in the questionnaire was divided into two consecutive parts. The first one included 5 broad categories and the second one more detailed categories within the previous ones. If a respondent answered only the first part of the question, the value of the more detailed category was estimated considering the answer to the first one. On the basis of the common distribution of these two variables, the conversion factor for each value was defined.

In five countries the data were considered self-weighting, that means they reflected a properly targeted population. In 15 surveys weights were constructed to adjust to population data. The weighting procedures are summarised in table A2.3.1.

Table A2.3.1. Data weighting

	Weighting procedure
Austria	Weights are computed for age groups of 5 years based on the age distribution for Austrian residents according to Statistik Austria on 01.01.2015.
Bulgaria	Self-weighted.
Croatia	Data were weighted by region, locality size, age, gender and education level.
Denmark	Self-weighted.
Estonia	Self-weighted.
Finland	The data were weighted by post-stratification to match the distribution in the population by groups: gender * age (18–34, 35–49, 50–64) * geographical area.
France	Weights were calculated using the "margin adjustment" methodology. The criteria of gender*age, region, and living alone were applied.
Greece	Self-weighted.
Hungary	During the weighting process the aspects considered partly followed pre-defined strata (region, gender, locality type, age group) which were derived from the target population, and partly the simplified education level (not more than 8 grade elementary school or secondary / tertiary education) derived from the census of 2011.
Iceland	Data were weighted by gender, age and region.
Italy	A post-stratification weight for each unit based on the strata it belongs to was computed. Each strata is defined by gender, age (category) and geographical area.
Lithuania	Data were weighted according to gender and age.
Norway	Weights were applied according to gender and age groups.
Poland	Data were weighted by gender, age, size of locality and region. Weights were constructed using iterative proportionate scaling.
Portugal	Weights were applied according to gender and age groups.
Romania	Self-weighted.
Spain*	The results were weighted to the actual universe by population size (4 groups), age (4 groups) and gender (2 groups).
Spain-Catalonia	The results were weighted to the actual universe by population size (4 groups), age (4 groups) and gender (2 groups).
Sweden	Data were weighted based on sex, age, and six geographical areas so that every combination of gender, age and area are represented according to the proportions in the population.
UK	Data were weighted based on age and gender.

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Annex 1. RARHA main study questionnaire – male[2]

This questionnaire arises from the Joint Action on Reducing Alcohol Related Harm (RARHA) which has received co-funding from the European Union Health Programme

RARHA
REDUCING ALCOHOL RELATED HARM

YOUR LOGO

Version for males

RARHA SMART SURVEY INSTRUMENT

INTRODUCTION (SAMPLE OF INDIVIDUAL PERSONS)

Good morning/afternoon/evening, I am *INTERVIEWER'S NAME*. I am working as an interviewer for NAME OF THE RESEARCH COMPANY. We are conducting an important international study on behalf of NAME OF THE UNIVERSITY OR SPONSORING AGENCY about people's experiences, opinions and attitudes towards alcohol. It does not matter whether you drink or not or how much you drink. We are interested in capturing as wide a range of views as possible. I'd like to take no more than … minutes of your time to interview.

ADD IF NECESSARY TO ENCOURAGE PARTICIPATION

The research is European wide and we are conducting its ………...……..… [*Adjective from country's name*] stage.
Currently about 20 European countries participate in the project, which is co-financed by European Commission. We would greatly appreciate your participation.

Your participation in the study is completely voluntary and you can refuse to respond to any questions you find irrelevant or too private. Your anonymity is entirely guaranteed. Your name or any other information that identify you as a person will not be recorded or associated in any way with your responses.

Would you kindly agree to participate in this study?

Time interview begins		
	hour	minute

[2] In a female version, thereseholds for a risky single occasion drinking were lower, i.e. 40 grams and 80 grams, respectively.

WB

To start with I would like to talk to you about your health.

WB_1. How is your health in general? Is it

Very good	1
Good	2
Fair	3
Bad	4
Very bad	5
No answer	9

WB_2. How would you rate your psychological well being? Is it **WB_2 – OPTIONAL**

Very good	1
Good	2
Fair	3
Bad	4
Very bad	5
No answer	9

WB_3. Further, we would like to know how you would generally rate your satisfaction with your relationships with people around you i.e. your family, friends and other colleagues. In general, are these relationships

Very good	1
Good	2
Fair	3
Bad	4
Very bad	5
No answer	9

BSQF

The next questions are about how often you drank particular alcoholic beverages in the past 12 months and how much you drank usually on the days when you drank.

BSQF_1. How often did you drink beer in the past 12 months? Would you say that you drank 'almost daily', 'weekly', 'monthly', 'less frequently' or 'never'?			
1) Almost daily	As you selected almost daily, was it	1) every day 2) 5–6 days a week	
2) Weekly	As you selected weekly, was it	3) 3–4 days a week 4) 1–2 days a week	
3) Monthly	As you selected monthly, was it	5) 2–3 days in a month 6) one day in a month	
4) Less frequently	As you selected less frequently, was it	7) 6–11 days a year 8) 2–5 days a year 9) a single day in the past 12 months	
5) Never	As you selected never	10) you did not drink beer in the past 12 months, but you drank earlier 11) you have never drunk beer in your life, or only a few sips	GO TO BSQF_3
9) No answer		99) no answer	

BSQF_2. Now we will talk about the quantity of beer consumed. How much beer did you drink usually on the days when you drank beer in the past 12 months? From the list of units below please select one and report how many units did you usually drink		
Unit to be selected	Number of units:	
1) ……………………………….…..		
2) ……………………………….…..		
3) ……………………………….…..	[ ]	0) Doesn't apply 99) No answer
4) ……………………………….…..		
5) ……………………………….…..		
9) No answer		
0) Doesn't apply		

BSQF_3. How often did you drink wine in the past 12 months? Would you say that you drank 'almost daily', 'weekly', 'monthly', 'less frequently' or 'never'?			
1) Almost daily	As you selected almost daily, was it	1) every day 2) 5–6 days a week	
2) Weekly	As you selected weekly, was it	3) 3–4 days a week 4) 1–2 days a week	
3) Monthly	As you selected monthly, was it	5) 2–3 days in a month 6) one day in a month	
4) Less frequently	As you selected less frequently, was it	7) 6–11 days a year 8) 2–5 days a year 9) a single day in the past 12 months	
5) Never	As you selected never	10) you did not drink beer in the past 12 months, but you drank earlier 11) you have never drunk beer in your life, or only a few sips	GO TO BSQF_5
9) No answer		99) no answer	

BSQF_4. How much wine did you drink usually on the days when you drank wine in the past 12 months? From the list of units below please select one and report how many units did you usually drink		
Unit to be selected	Number of units:	
1) ……………………………….…..		
2) ……………………………….…..		
3) ……………………………….…..	[ ]	0) Doesn't apply 99) No answer
4) …………………………………...		
5) ……………………………….…..		
9) No answer		
0) Doesn't apply		

BSQF_5. How often did you drink spirits (e.g. vodka, gin, whisky, brandy) in the past 12 months? Would you say that you drank 'almost daily', 'weekly', 'monthly', 'less frequently' or 'never'?			
1) Almost daily	As you selected almost daily, was it	1) every day 2) 5–6 days a week	
2) Weekly	As you selected weekly, was it	3) 3–4 days a week 4) 1–2 days a week	
3) Monthly	As you selected monthly, was it	5) 2–3 days in a month 6) one day in a month	
4) Less frequently	As you selected less frequently, was it	7) 6–11 days a year 8) 2–5 days a year 9) a single day in the past 12 months	
5) Never	As you selected never	10) you did not drink beer in the past 12 months, but you drank earlier 11) you have never drunk beer in your life, or only a few sips	GO TO BSQF_7
9) No answer		99) no answer	

BSQF_6. How much spirits did you drink usually on the days when you drank spirits in the past 12 months? From the list of units below please select one and report how many units did you usually drink		
Unit to be selected	Number of units:	
1) …………………………………..…..		
2) …………………………………..…..		
3) …………………………………..…..	☐	0) Doesn't apply 99) No answer
4) ………………………………….....		
5) …………………………………..…..		
9) No answer		
0) Doesn't apply		

BSQF_7 – BSQF_8 – OPTIONAL

BSQF_7. How often did you drink ………. in the past 12 months? Would you say that you drank 'almost daily', 'weekly', 'monthly', 'less frequently' or 'never'?			
1) Almost daily	As you selected almost daily, was it	1) every day 2) 5–6 days a week	
2) Weekly	As you selected weekly, was it	3) 3–4 days a week 4) 1–2 days a week	
3) Monthly	As you selected monthly, was it	5) 2–3 days in a month 6) one day in a month	
4) Less frequently	As you selected less frequently, was it	7) 6–11 days a year 8) 2–5 days a year 9) a single day in the past 12 months	
5) Never	As you selected never	10) you did not drink beer in the past 12 months, but you drank earlier 11) you have never drunk beer in your life, or only a few sips	GO TO F
9) No answer		99) no answer	

BSQF_8. How much ……… did you drink usually on the days when you drank ……… in the past 12 months? From the list of units below please select one and report how many units did you usually drink		
Unit to be selected	Number of units:	
1) ……………………………………..		
2) ……………………………………..		
3) ……………………………………..	[ ]	0) Doesn't apply 99) No answer
4) ……………………………………..		
5) ……………………………………..		
9) No answer		
0) Doesn't apply		

F

F_1. Finally I would like to ask you about your overall frequency of drinking, how often did you drink any alcohol beverage such as beer, wine, spirits or other reported by you in response to the previous questions, even in small amounts, in the past 12 months?			
Would you say that you drank 'almost daily', 'weekly', 'monthly', 'less frequently' or 'never'?			
1) Almost daily	As you selected almost daily, was it	1) every day 2) 5–6 days a week	
2) Weekly	As you selected weekly, was it	3) 3–4 days a week 4) 1–2 days a week	
3) Monthly	As you selected monthly, was it	5) 2–3 days in a month 6) one day in a month	
4) Less frequently	As you selected less frequently, was it	7) 6–11 days a year 8) 2–5 days a year 9) a single day in the past 12 months	
5) Never	As you selected never	10) you did not drink beer in the past 12 months, but you drank earlier 11) you have never drunk beer in your life, or only a few sips	GO TO UA
9) No answer		99) no answer	

CD

The next questions are about the circumstances in which you drank alcohol in the past 12 months:

	Almost daily (5-7 days a week)	Weekly (1-4 days a week)	Monthly (1- 3 days a month)	Less frequently 1 – 11 days a year)	Never in the past 12 months	No answer	Doesn’t apply
CD_1. How often did you drink with a meal?	1	2	3	4	5	9	0
CD_2. Next questions will be about the place where you drink. How often did you drink							
a) in your home	1	2	3	4	5	9	0
b) in somebody else’s home	1	2	3	4	5	9	0
c) in a pub, bar, club, restaurant	1	2	3	4	5	9	0
d) outdoors, that means in parks, in the street, etc.	1	2	3	4	5	9	0
CD_3. Next questions are about the people you drink with. How often did you drink							
a) with family members, incl. your partner	1	2	3	4	5	9	0
b) with friends, colleagues or acquaintances	1	2	3	4	5	9	0
c) alone	1	2	3	4	5	9	0

RSOD

RSOD_1. What was the greatest number of drinks on one occasion during the past 12 months?
One drink is ………

Number of drinks ☐ No answer – 99 Doesn't apply – 0

IF RSOD_1 LOWER THAN 60 GRAMS OF PURE ALCOHOL – GO TO DR_1

RSOD_2. How often in the past 12 months, have you had … drinks or more on one occasion, which is …...…… [Country-specific number of drinks has to be entered which corresponds with 60 grams of 100% alcohol]?			
Would you say that you drank 'almost daily', 'weekly', 'monthly', 'less frequently' or 'never'?			
1) Almost daily	As you selected almost daily, was it	1) every day 2) 5–6 days a week	
2) Weekly	As you selected weekly, was it	3) 3–4 days a week 4) 1–2 days a week	
3) Monthly	As you selected monthly, was it	5) 2–3 days in a month 6) one day in a month	
4) Less frequently	As you selected less frequently, was it	7) 6–11 days a year 8) 2–5 days a year 9) a single day in the past 12 months	
5) Never in the past 12 months		10) Never in the past 12 months	GO TO DR_1
9) No answer		99) no answer	
0) Doesn't apply		0) doesn't apply	

RSOD_3. How many hours does it usually take you to drink … drinks or that amount of alcohol as defined above?

1) Less than 1 hour
2) 1–2 hours
3) 3–4 hours
4) 5–6 hours
5) 7–8 hours
6) 9 or more hours
9) No answer
0) Doesn't apply

The next questions are about the circumstances in which you drank … drinks or more in the past 12 months.
[*Country-specific number of drinks has to be entered which corresponds with 60 grams of 100% alcohol*]

RSOD_4 – RSOD_6 – OPTIONAL

	Almost daily (5-7 days a week)	Weekly (1-4 days a week)	Monthly (1- 3 days a month)	Less frequently 1 – 11 days a year)	Never in the past 12 months	No answer	Doesn't apply
RSOD_4. How often did you drink with a meal?	1	2	3	4	5	9	0
RSOD_5 Next questions will be about the place where you drink. How often did you drink							
a) in your home	1	2	3	4	5	9	0
b) in somebody else's home	1	2	3	4	5	9	0
c) in a pub, bar, club, restaurant	1	2	3	4	5	9	0
d) outdoors, that means in parks, in the street, etc.	1	2	3	4	5	9	0
RSOD_6. Next questions are about the people you drink with. How often did you drink							
a) with family members, incl. your partner	1	2	3	4	5	9	0
b) with friends, colleagues or acquaintances	1	2	3	4	5	9	0
c) alone	1	2	3	4	5	9	0

RSOD_7. How often in the past 12 months, have you had … drinks or more on one occasion, which is ……..…. [Country-specific number of drinks has to be entered which corresponds with 120 grams of 100% alcohol]?		
Would you say that you drank 'almost daily', 'weekly', 'monthly', 'less frequently' or 'never'?		
1) Almost daily	As you selected almost daily, was it	1) every day 2) 5–6 days a week
2) Weekly	As you selected weekly, was it	3) 3–4 days a week 4) 1–2 days a week
3) Monthly	As you selected monthly, was it	5) 2–3 days in a month 6) one day in a month
4) Less frequently	As you selected less frequently, was it	7) 6–11 days a year 8) 2–5 days a year 9) a single day in the past 12 months
5) Never in the past 12 months		10) Never in the past 12 months
9) No answer		99) no answer
0) Doesn't apply		0) doesn't apply

DR

DR_1. How often in the past 12 months did you drink enough to feel unsteady on your feet or so your speech was slurred?			
Would you say that you drank 'almost daily', 'weekly', 'monthly', 'less frequently' or 'never'?			
1) Almost daily	As you selected almost daily, was it	1) every day 2) 5–6 days a week	
2) Weekly	As you selected weekly, was it	3) 3–4 days a week 4) 1–2 days a week	
3) Monthly	As you selected monthly, was it	5) 2–3 days in a month 6) one day in a month	
4) Less frequently	As you selected less frequently, was it	7) 6–11 days a year 8) 2–5 days a year 9) a single day in the past 12 months	
5) Never in the past 12 months		10) Never in the past 12 months	GO TO WH_1
9) No answer		99) no answer	
0) Doesn't apply		0) doesn't apply	

DR_2. How many drinks usually makes you feel unsteady on your feet or so your speech was slurred? One drink is ……… OPTIONAL

Number of drinks ☐ No answer – 999 Doesn't apply – 0

WH

WH_1. Now we would like to ask you about your weight because effects of alcohol are different for people of different size. How much is your weight?

Weight in kilogram	☐	No answer – 999	Doesn’t apply – 0

WH_2. And what is your height? **WH_2 – OPTIONAL**

Height in centimeters	☐	No answer – 999	Doesn’t apply – 0

IF RESPONDENT REPORTED ABSTAINING IN THE PAST 12 MONTHS OR DRANK LESS FREQUENTLY THAN 6 DAYS IN THE PAST 12 MONTHS (RESPONSES 8–11 TO F_1) SKIP NEXT SECTION AND GO TO UA

IF RESPONDENT DRANK 6 DAYS OR MORE FREQUENTLY IN THE PAST 12 MONTHS (RESPONSES 1–7 TO F_1) CONTINUE TO NEXT SECTION RAPS

RAPS

Now I'd like to ask you some more questions about your drinking in the past 12 months

If Yes, was it just once or twice, or more often in the past 12 months?			
RAPS_1. Have you had a feeling of guilt or remorse after drinking?	1) Yes 2) No 9) No answer 0) Doesn't apply	go to RAPS_1_1. go to RAPS_2. go to RAPS_2.	**RAPS_1_1** 1) 1–2 times 2) 3 or more times 9) No answer 0) Doesn't apply
RAPS_2. Have you had a friend or family member tell you about things you said or did while you were drinking that you did not remember?	1) Yes 2) No 9) No answer 0) Doesn't apply	go to RAPS_2_1 go to RAPS_3 go to RAPS_3	**RAPS_2_1** 1) 1–2 times 2) 3 or more times 9) No answer 0) Doesn't apply
RAPS_3. Have you failed to do what was normally expected from you because of drinking?	1) Yes 2) No . 9) No answer 0) Doesn't apply	go to RAPS_3_1. go to RAPS_4 go to RAPS_4	**RAPS_3_1** 1) 1–2 times 2) 3 or more times 9) No answer 0) Doesn't apply
RAPS_4. Do you sometimes take a drink in the morning when you first got up?	1) Yes 2) No 9) No answer 0) Doesn't apply	go to RAPS_4_1. go to UA.	**RAPS_4_1** 1) 1–2 times 2) 3 or more times 9) No answer 0) Doesn't apply

UA – OPTIONAL

This section of the questionnaire will be dealing with unrecorded alcoholic beverages. We would like to know how much alcohol you personally acquired (e.g. brought from abroad, produced at home or gotten from a home producer and alike) in the past 12 months which probably has not been recorded in official statistics of recorded alcohol consumption.

HOW TO ELABORATE THIS SECTION – SEE GUIDELINES FOR SURVEY IMPLEMENTATION

LIFETIME AND 12 MONTH ABSTAINERS (RESPONSES 10–11 TO F_1) SKIP MD SECTION AND GO TO MND SECTION

MD – OPTIONAL

People have different reasons for drinking alcoholic beverages. We would like to know what you regard as important reasons for your own drinking. I will read a number of reasons. Thinking of the times you drank in the past 12 months, be it beer, wine, or spirits, how often did you drink…

	Never	Rarely	About half of the time	Most of the time	Always	No answer	Doesn't apply
MD_1. because you like the feeling after having a drink?	1	2	3	4	5	9	0
MD_2. because it's fun	1	2	3	4	5	9	0
MD_3. because it improves parties and celebrations	1	2	3	4	5	9	0
MD_4. just to get drunk?	1	2	3	4	5	9	0
MD_5. to fit in with a group you like?	1	2	3	4	5	9	0
MD_6. so you won't feel left out [with others]?	1	2	3	4	5	9	0
MD_7. because it helps you when you feel depressed	1	2	3	4	5	9	0
MD_8. because you think it is healthy?	1	2	3	4	5	9	0
MD_9. to forget about everything	1	2	3	4	5	9	0
MD_10. because it is a part of good diet	1	2	3	4	5	9	0

SKIP MND SECTION AND GO TO AP SECTION

MND

People have various reasons for non-drinking or abstaining from alcoholic beverages. We would like to know what you regard as important reasons for your abstinence from alcohol in the past 12 months or longer. For each of the following, please tell me if this is a reason you do not drink.

	Yes	No	No answer	Doesn't apply
MND_1. I have no interest in drinking	1	2	9	0
MND_2. I have seen bad examples of what alcohol could do	1	2	9	0
MND_3. Drinking is against my religion	1	2	9	0
MND_4. I was brought up not to drink	1	2	9	0
MND_5. Drinking is too expensive	1	2	9	0
MND_6. Drinking is a waste of money	1	2	9	0
MND_7. Drinking is bad for your health	1	2	9	0
MND_8. My health is bad, and I can't drink	1	2	9	0
MND_9. I can't drink because I am taking medication	1	2	9	0
MND_10. I don't like the taste of alcohol	1	2	9	0
MND_11. I don't like the effect of alcohol on me	1	2	9	0
MND_12. I've been hurt by someone else's drinking	1	2	9	0
MND_13. Drinking would have a bad effect on my activities	1	2	9	0
MND_14. I am afraid I would have problems with alcohol or be an alcoholic if I drank	1	2	9	0
MND_15. Previously my drinking already harmed my life	1	2	9	0

AP

I will read you out some statements on attitudes to alcohol policy. For each statement tell me if you strongly agree, somewhat agree, somewhat disagree or strongly disagree:

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	No answer
AP_1. Alcohol is a product like any other and does not require any special restrictions	1	2	3	4	9
AP_2. Adult people are responsible enough to protect themselves from harm caused by their drinking	1	2	3	4	9
AP_3. Public authorities have the responsibility to protect people from being harmed by their own drinking.	1	2	3	4	9
AP_4. The number of places selling alcoholic beverages should be kept low in order to reduce alcohol-related harm	1	2	3	4	9
AP_5. Prices of alcoholic beverages should be kept high in order to reduce alcohol-related harm	1	2	3	4	9
AP_6. Alcohol education and information should be the most important policy to reduce alcohol-related harm	1	2	3	4	9
AP_7. Advertising of alcoholic beverages should be banned	1	2	3	4	9
AP_8. Police should be allowed to check randomly if a driver is sober or not even without any indication of drunken driving	1	2	3	4	9
AP_9. Printed warnings about alcohol-related harm should be displayed on alcohol packaging	1	2	3	4	9
AP_10. There should be limits on how late in the evening you can buy alcoholic beverages	1	2	3	4	9
AP_11. Parents, and not legal authorities, should decide at what age their child is allowed to drink alcoholic beverages	1	2	3	4	9
AP_12 OPTIONAL					
AP_12. Sponsoring of athletes, sport teams or sport events by alcohol industry should be legally forbidden	1	2	3	4	9

CH

CH_1. During your child or teenage years, did you live with someone whom you consider to be fairly heavy drinkers or someone who drinks a lot?

1) Yes
2) No GO TO NEXT SECTION (HD)
9) No answer

If yes, was it: **OPTIONAL (a – f)**

	Yes	No	No answer	Doesn't apply
a) father (biological, adoptive father, foster father)	1	2	9	0
b) mother (biological, adoptive mother, foster mother)	1	2	9	0
c) father's new wife, girlfriend, partner	1	2	9	0
d) mother's new husband, boyfriend, partner	1	2	9	0
e) siblings	1	2	9	0
f) others in your household	1	2	9	0

CH_2. How much were you negatively affected by these person/persons' drinking? Were you affected a lot, a little or not affected at all?

1) affected a lot
2) affected a little
3) not affected at all
9) no answer
0) doesn't apply

CH_3 – CH_6 – OPTIONAL

CH_3. As a child or teenager were you ever left unsupervised in an unsafe situation due to drinking of one or more of the persons you lived with?

1) Very often
2) Often
3) Sometimes
4) Rarely
5) Never
9) No answer
0) Doesn't apply

CH_4. As a child or teenager were you ever yelled at or otherwise verbally abused due to drinking of one or more of the persons you lived with ?

1) Very often
2) Often
3) Sometimes
4) Rarely
5) Never
9) No answer
0) Doesn't apply

CH_5. (As a child or teenager) were you ever physically hurt due to drinking of one or more of the persons you lived with?

1) Very often
2) Often
3) Sometimes
4) Rarely
5) Never
9) No answer
0) Doesn't apply

CH_6. (As a child or teenager) were you ever witness to serious violence due to drinking of one or more of the persons you lived with?

1) Very often
2) Often
3) Sometimes
4) Rarely
5) Never
9) No answer
0) Doesn't apply

HD

HD_1. Thinking about the past 12 months, do you know someone who you consider to be fairly heavy drinkers or who drinks a lot sometimes?

1) Yes	go to HD_2a_1.
2) No	go to COM.
9) No answer	go to COM.

HD_2. Who are these people?		**If Yes** **How much did this person(s) drinking affect you negatively in the past 12 months? Were you affected a lot, a little or not affected at all?**
HD_2a_1. Household member	1) Yes go to HD_2a_2. 2) No go to HD_2b_1. 9) No answer go to HD_2b_1. 0) Doesn't apply	**HD_2a_2.** 1) Affected a lot 9) No answer 2) Affected a little 0) Doesn't apply 3) Not affected at all
HD_2b_1. Family member or relative not in household, incl. ex-spouse or ex-partner	1) Yes go to HD_2b_2. 2) No go to HD_2c_1. 9) No answer go to HD_2c_1 0) Doesn't apply	**HD_2b_2.** 1) Affected a lot 9) No answer 2) Affected a little 0) Doesn't apply 3) Not affected at all
HD_2c_1. Work or school mate	1) Yes go to HD_2c_2. 2) No go to HD_2d_1. 9) No answer go to HD_2d_1. 0) Doesn't apply	**HD_2c_2.** 1) Affected a lot 9) No answer 2) Affected a little 0) Doesn't apply 3) Not affected at all
HD_2d_1. Neighbour	1) Yes go to HD_2d_2. 2) No go to HD_2e_1. 9) No answer go to HD_2e_1. 0) Doesn't apply	**HD_2d_2.** 1) Affected a lot 9) No answer 2) Affected a little 0) Doesn't apply 3) Not affected at all
HD_2e_1. Other friend or acquaintance	1) Yes go to HD_2e_2. 2) No go to COM. 9) No answer go to COM. 0) Doesn't apply	**HD_2e_2.** 1) Affected a lot 9) No answer 2) Affected a little 0) Doesn't apply 3) Not affected at all

COM

Now let me ask you some questions about various problems that can occur because of someone else's drinking. I will ask you about several problems. In the past 12 months …

	A. Select	B. Were you affected a lot, a little or not affected at all?	C. Was it someone you know or someone you do not know?
COM_1. because of someone else's drinking, have you been woken up at night?	1) Yes go to COM_1B 2) No go to COM_2 9) No answer	1) a lot 2) a little 3) not affected at all 9) no answer 0) doesn't apply	1) someone you know 2) someone you do not know 3) both 9) no answer 0) doesn't apply
COM_2. because of someone else's drinking, have you been verbally abused i.e. called names or otherwise insulted?	1) Yes go to COM_2B 2) No go to COM_3 9) No answer	1) a lot 2) a little 3) not affected at all 9) no answer 0) doesn't apply	1) someone you know 2) someone you do not know 3) both 9) no answer 0) doesn't apply
COM_3. because of someone else's drinking, have you been harmed physically?	1) Yes go to COM_3B 2) No go to COM_4 9) No answer	1) a lot 2) a little 3) not affected at all 9) no answer 0) doesn't apply	1) someone you know 2) someone you do not know 3) both 9) no answer 0) doesn't apply
COM_4. because of someone else's drinking, have you been involved in a serious argument?	1) Yes go to COM_4B 2) No go to COM_5 9) No answer	1) a lot 2) a little 3) not affected at all 9) no answer 0) doesn't apply	1) someone you know 2) someone you do not know 3) both 9) no answer 0) doesn't apply
COM_5. have you been a passenger with a driver who had had too much to drink?	1) Yes go to COM_5B 2) No go to COM_6 9) No answer	1) a lot 2) a little 3) not affected at all 9) no answer 0) doesn't apply	1) someone you know 2) someone you do not know 3) both 9) no answer 0) doesn't apply
COM_6. have you been involved in a traffic accident because of someone's drinking?	1) Yes go to COM_6B 2) No go to COM_7 9) No answer	1) a lot 2) a little 3) not affected at all 9) no answer 0) doesn't apply	1) someone you know 2) someone you do not know 3) both 9) no answer 0) doesn't apply
COM_7. because of someone else's drinking, have you felt unsafe in public places, including public transportation?	1) Yes go to COM_7B 2) No go to COM_8 9) No answer	1) a lot 2) a little 3) not affected at all 9) no answer 0) doesn't apply	1) someone you know 2) someone you do not know 3) both 9) no answer 0) doesn't apply
COM_8. have you been annoyed by people vomiting, urinating or littering when they have been drinking?	1) Yes go to COM_8B 2) No go to COM_9 9) No answer	1) a lot 2) a little 3) not affected at all 9) no answer 0) doesn't apply	1) someone you know 2) someone you do not know 3) both 9) no answer 0) doesn't apply

OPTIONAL COM_9 – COM_12

COM_9. In the past 12 months were you responsible for a child or teenager?

1) Yes GO TO COM_10
2) No*
9) No answer*

COM_10. Over the past 12 months was a child or a teenager you were responsible for negatively affected by someone else's drinking?

1) Yes GO TO COM_11
2) No*
9) no answer*
0) doesn't apply

COM_11. Was s/he affected a lot, a little or not affected at all?

1) a lot
2) a little
9) no answer
0) doesn't apply

COM_12. Whose drinking affected her/him?

1) your drinking
2) drinking of someone else
3) both
9) no answer
0) doesn't apply

*** IF RESPONDENT REPORTED ABSTAINING IN THE PAST 12 MONTHS OR DRANK LESS FREQUENTLY THAN 6 DAYS IN THE PAST 12 MONTHS (RESPONSES 8–11 TO F_1) SKIP NEXT SECTION AND GO TO SD_1**

IF RESPONDENT DRANK 6 DAYS OR MORE FREQUENTLY IN THE PAST 12 MONTHS (RESPONSES 1–7 TO F_1) CONTINUE TO NEXT SECTION CIDI

CIDI – OPTIONAL

The next questions are about problems you may have had because of drinking <u>during the past 12 months</u>.

	Yes	No	No answer	Doesn't apply
CIDI_1. Was there a time in the past 12 months when your drinking or being hung over frequently interfered with your work or responsibilities at school, on a job, or at home?	1	2	9	0
CIDI_2. Was there a time in the past 12 months when your drinking caused arguments or other serious or repeated problems with your family, friends, neighbors, or co-workers?	1	2 GO TO CIDI_4	9	0
CIDI_3. Did you continue to drink even though it caused problems with these people?	1	2	9	0
CIDI_4. Were there times in the past 12 months when you were often under the influence of alcohol in situations where you could get hurt, for example when riding a bicycle, driving, operating a machine, or anything else?	1	2	9	0
CIDI_5. Were you ever arrested or stopped by the police because of drunk driving or drunken behavior?	1	2	9	0
CIDI_6. During the past 12 months, was there a time when you often had such a strong desire to drink that you couldn't stop yourself from taking a drink or found it difficult to think of anything else?	1	2	9	0
CIDI_7. During the past 12 months, did you need to drink a larger amount of alcohol to get an effect, or did you find that you could no longer get a "buzz" or a high on the amount you used to drink?	1	2	9	0
CIDI_8. Did you have times during the past 12 months when you stopped, cut down, or went without drinking and then experienced withdrawal symptoms like fatigue, headaches, diarrhoea, the shakes, or emotional problems?	1	2	9	0
CIDI_9. Did you have times during the past 12 months when you took a drink to keep from having problems like these in previous question?	1	2	9	0
CIDI_10. Did you have times during the past 12 months when you started drinking even though you promised yourself you wouldn't, or when you drank a lot more than you intended?	1	2	9	0
CIDI_11. Were there times during the past 12 months when you drank more frequently or for more days in a row than you intended?	1	2	9	0
CIDI_12. Did you have times during the past 12 months when you started drinking and became drunk when you didn't want to?	1	2	9	0
CIDI_13. Were there times during the past 12 months when you tried to stop or cut down on your drinking and found that you were not able to do so?	1	2	9	0
CIDI_14. Did you have periods during the past 12 months of several days or more when you spent so much time drinking or recovering from the effects of alcohol that you had little time for anything else?	1	2	9	0
CIDI_15. Did you have a time during the past 12 months when you gave up or greatly reduced important activities because of your drinking – like sports, work, or seeing friends and family?	1	2	9	0
CIDI_16. During the past 12 months, did you continue to drink when you knew you had a serious physical or emotional problem that might have been caused by or made worse by drinking?	1	2	9	0

SD

SD_1. What is your gender?

1 Male
2 Female

SD_2. What is your age?

Number of years [ ] No answer – 99

SD_3. What is your nationality? OPTIONAL

HOW TO ELABORATE NATIONAL CATEGORIES – SEE GUIDELINES FOR SURVEY IMPLEMENTATION

99 No answer

SD_4. What is your current legal marital status?

1 Married (or in a registered partnership) and living together with my (marriage) partner GO TO SD6
2 Married (or in a registered partnership) and living apart from my (marriage) partner
3 Never married and never in a registered partnership
4 Divorced and not married
5 Widowed and not married
9 No answer

SD_5. Do you have a permanent partner? OPTIONAL

1 Yes, I have a permanent partner and I live with him/her
2 Yes, I have a permanent partner but I do not live with him/her
3 No, I have no permanent partner
9 No answer
0 Doesn't apply

SD_6. How many persons are permanently living in your household, including yourself, your spouse or partner, and any other family members living with you?

1 I'm living alone GO TO SD_8

[ ] Number of persons living in my household (please include yourself in this number):

99 No answer

SD_7. How many persons living in your household are <u>younger than 18 years</u> old?

Number of persons below 18 years: [ ] No answer 99 Doesn't apply – 0

SD_8. Which of these categories comes closest to the type of place where your main residence is located?

1 A village or a farm
2 A small city or town (below 50,000 res.)
3 A medium-size city (50,000–250,000 res.)
4 A large city (more than 250,000 up to 1 million res.)
5 A very large city (over 1 million res.)
9 No answer

SD_9. What is the highest school grade you have completed?

HOW TO ELABORATE EDUCATION CATEGORIES – SEE GUIDELINES FOR SURVEY IMPLEMENTATION

99 No answer

SD_10. Are you currently professionally active or non-active?

1) Active go to SD_11.

2) Non-active go to SD_13.

9) No answer go to SD_19

SD_11. What is your current occupation?

Employment category

1) Unskilled manual worker (e.g. servant, domestic worker)
2) Skilled manual worker (e.g. farmer, fisherman, craftsman, electrician, construction worker, taxi-driver)
3) Manager, supervisor (e.g. managerial staff, high and medium-level civil servants, armed forces or police officers)
4) Other white collar worker (e.g. other civil servants, basic ranks of armed forces or police personnel)
5) Professional (e.g. lawyer, medical practitioner, architect, accountant)
6) Businessperson (e.g. business proprietor, employer, owner or co-owner of a company, owner of a shop, restaurant)
7) Other, please specify …………………………….
9) No answer
0) Doesn't apply

SD_12. Are you employed or self-employed?

1) employed
2) self-employed
9) No answer
0) Doesn't apply

GO TO SD_19

SD_13. If you are currently professionally non-active are you

1) Student
2) Unemployed or temporarily not working
3) Retired or unable to work through illness
4) Home carer
5) Other non-active
9) No answer
0) Doesn't apply

SD_14. Did you do any paid work in the past?

1) YES GO TO SD_15
2) NO GO TO SD_17
9) No answer GO TO SD_17
0) Doesn't apply

SD_15. What was your last occupation, please select from the list below?

Employment category

1) Unskilled manual worker (e.g. servant, domestic worker)
2) Skilled manual worker (e.g. farmer, fisherman, craftsman, electrician, construction worker, taxi-driver)
3) Manager, supervisor (e.g. managerial staff, high and medium-level civil servants, armed forces or police officers)
4) Other white collar worker (e.g. other civil servants, basic ranks of armed forces or police personnel)
5) Professional (e.g. lawyer, medical practitioner, architect, accountant)
6) Businessperson (e.g. business proprietor, employer, owner or co-owner of a company, owner of a shop, restaurant)
7) Other, please specify …………………………….
9) No answer
0) Doesn't apply

SD_16. Were you employed or self-employed?

1) employed
2) self-employed
9) No answer
0) Doesn't apply

GO TO SD_19

SD_17. If you are a student what has been last occupation of your parent who contributed more to the household budget?

If you are home carer please tell me what has been last occupation of your current spouse or partner?

Employment category

1) Unskilled manual worker (e.g. servant, domestic worker)
2) Skilled manual worker (e.g. farmer, fisherman, craftsman, electrician, construction worker, taxi-driver)
3) Manager, supervisor (e.g. managerial staff, high and medium-level civil servants, armed forces or police officers)
4) Other white collar worker (e.g. other civil servants, basic ranks of armed forces or police personnel)
5) Professional (e.g. lawyer, medical practitioner, architect, accountant)
6) Businessperson (e.g. business proprietor, employer, owner or co-owner of a company, owner of a shop, restaurant)
7) Other, please specify …………………………….
9) No answer
0) Doesn't apply

SD_18. Is s/he employed or self-employed?

1) employed
2) self-employed
9) No answer
0) Doesn't apply

SD_19. Do you regularly (at least on weekly basis) drive a car or other motor vehicle?
SD_19 OPTIONAL

1) Yes
2) No
9) No answer

SD_20. Now we would like to ask you to estimate your household's total net income. You get this by adding up the monthly income from all sources and all household members (including yourself), and by deducting national taxes and compulsory contributions to the national social security. Your monthly net household income is…

Income [ ] 999999999) No answer GO TO SD_20A

SD_20A. Can you say which income category from the list below describes your household's total net income:

1)
2)
3)
4)
5)
6)
7)
8)
9)
10)
99) No answer
0) Doesn't apply

SD_21. What is your religious affiliation?

1) Roman Catholic
2) Protestant
3) Orthodox
4) Other Christian churches
5) Muslim
6) Hinduism
7) Buddhism
8) Jewish
9) None
10) Other, please specify
99) No answer

SD_22. What is your religious involvement? OPTIONAL

1) Believing and practising regularly
2) Believing and not-practising regularly
3) Not believing
9) No answer

DATE OF INTERVIEW [ ]

INTERVIEWER [ ]

Time the interview ends [ ] hour [ ] minute

If the interview was interrupted (for more than 5 minutes) please sum up duration of all breaks in minutes.

[ ] minutes

A3 Results

A3.1 Abstainers

Marta Zin-Sędek, Katarzyna Okulicz-Kozaryn, Silvia Ghirini, Emanuele Scafato, Lucia Galluzzo

Introduction

Abstention is an important indicator in monitoring the impact of global alcohol consumption on health and its evaluation is crucial for understanding epidemiological estimates (Rehm, Scafato 2011). There are two different types of abstainers – lifetime abstainers (those who have never consumed alcohol), former drinkers (people who have previously consumed alcohol, but who have not done so in the previous 12-month period). Together, these two subgroups constitute a group which may be described as past year abstainers – people who have not had any alcoholic drink in the past 12 months (World Health Organisation, 2014).

However, Rehm et al. (2008) on the basis of the National Alcohol Survey showed that more than half of respondents, who in one survey defined themselves as lifetime abstainers, in a previous survey reported some alcohol drinking. Therefore, in epidemiological research, alcohol abstinence is usually defined as a phenomenon concerning the present lifestyle (past 12 months) rather than a life-long unchangeable characteristic.

The prevalence of abstinence varies between different societies and in European countries ranges from 5% to 20% in the adult population. Women are much more likely to be abstainers than men and abstinence is more prevalent in older age groups (Babor et al. 2010).

Methods

In the RARHA SEAS survey respondents were asked how often in the past 12 months they had drunk alcohol. If they hadn't drunk, they had a choice between two answers: (a) they haven't drunk in the last 12 month but they had drunk earlier, or (b) they have never drunk in their life. Therefore, in this chapter, three indicators of abstainers are discussed:

1. adults who have not had any alcoholic drink in the past 12 months (as the sum of the two following measures) – described on charts below as past year abstainers,
2. those adults who have never consumed alcohol – described on charts below as lifetime abstainers,
3. adults who have previously consumed alcohol, but who have not done so in the previous 12-month period – described on charts below as former drinkers.

The prevalence rates were analysed taking into account respondents' gender and age, and compared using the chi-square test (in regard to the sample sizes, group differences are interpreted as significant if the p value is lower than 0.01). Averages were calculated as simple arithmetic means of frequencies computed for individual surveys.

Results

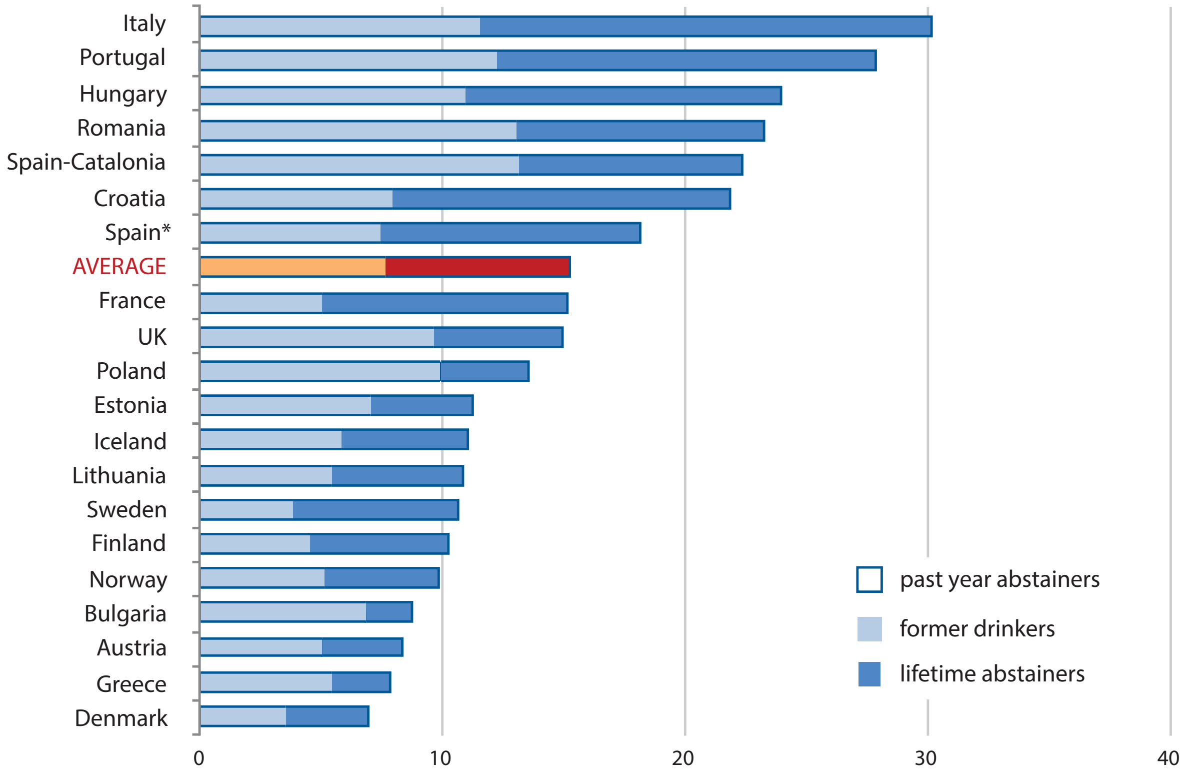
On average, abstainers (those who have not drunk in the past 12 months) constitute 15.3% of respondents in participating countries, including 7.6% of lifetime abstainers.

The percentages of past year abstainers are lower than 1st quartile (10.2%) in five out of twenty surveys (Denmark, Greece, Austria, Bulgaria and Norway) and the percentage is higher than 3rd quartile (22.0%) in Italy, Portugal, Hungary, Romania, Spain-Catalonia[1] and Croatia.

The highest value of lifetime abstinence is recorded in Italy (18.6%), followed by Portugal (15.6%), Croatia (13.9%) and Hungary (13.0%). The lowest percentages of lifetime abstainers are observed in Bulgaria (1.8%), followed by Greece (2.4%), Austria (3.3%), Denmark (3.4%) and Poland (3.6%).

[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

Figure A3.1.1. Prevalence (%) of past year abstainers



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

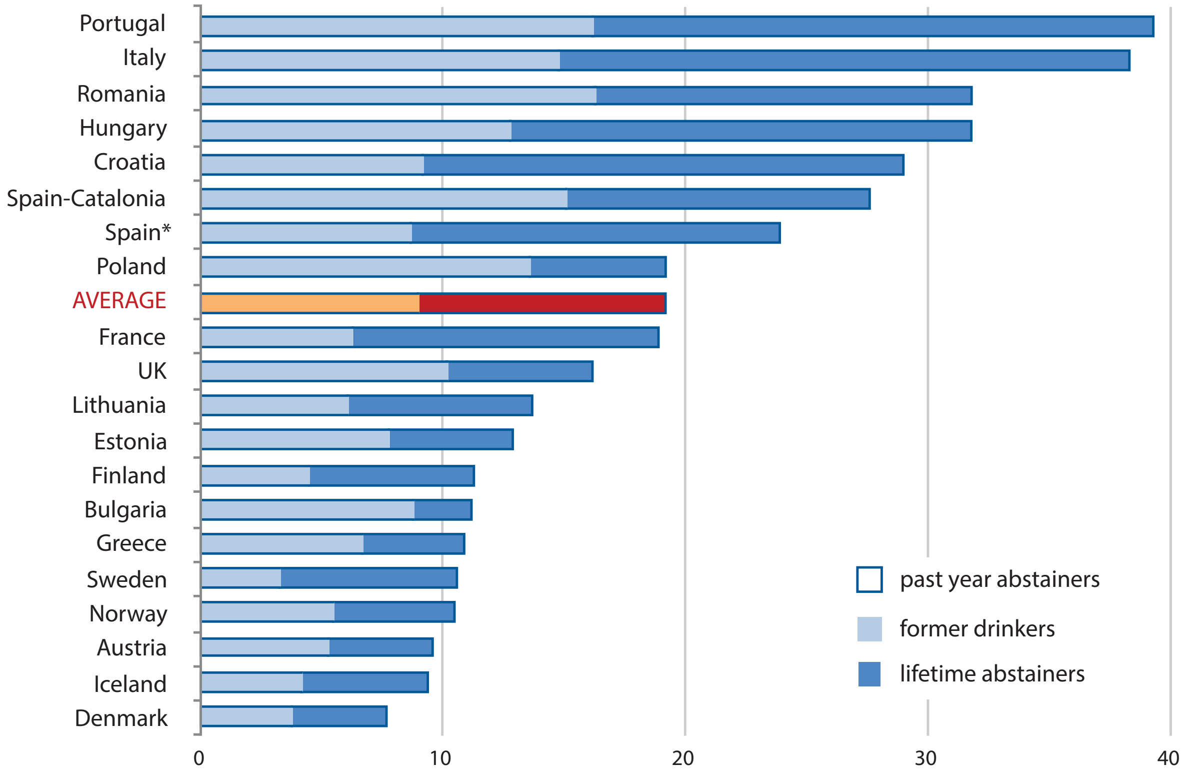
In general, in Europe the percentage of past year abstainers is higher among females (19.3%) than males (11.4%). The analysis shows that in the Nordic countries there is no statistical difference by gender (Denmark, Finland, Norway, Sweden, Estonia and UK).

Hungary, Italy, Portugal and Romania have the highest proportion of past year abstainers for both genders (over 30%). The lowest percentages of past year abstainers in both genders (less than bottom quartile: male=7.9%; female=11.0%) may be observed in Denmark and Austria. The same low values are also present among males in Greece, Bulgaria and Lithuania and among females in Iceland, Norway and Sweden.

Also, lifetime abstinence is more often declared by women (10.2%) than men (5.0%). A statistically significant higher prevalence of lifetime abstinence among women than men is observed in most of the European countries, with the exception of some northern countries (Denmark, Estonia, Finland, Iceland, Norway, Sweden, UK) where this difference is not significant.

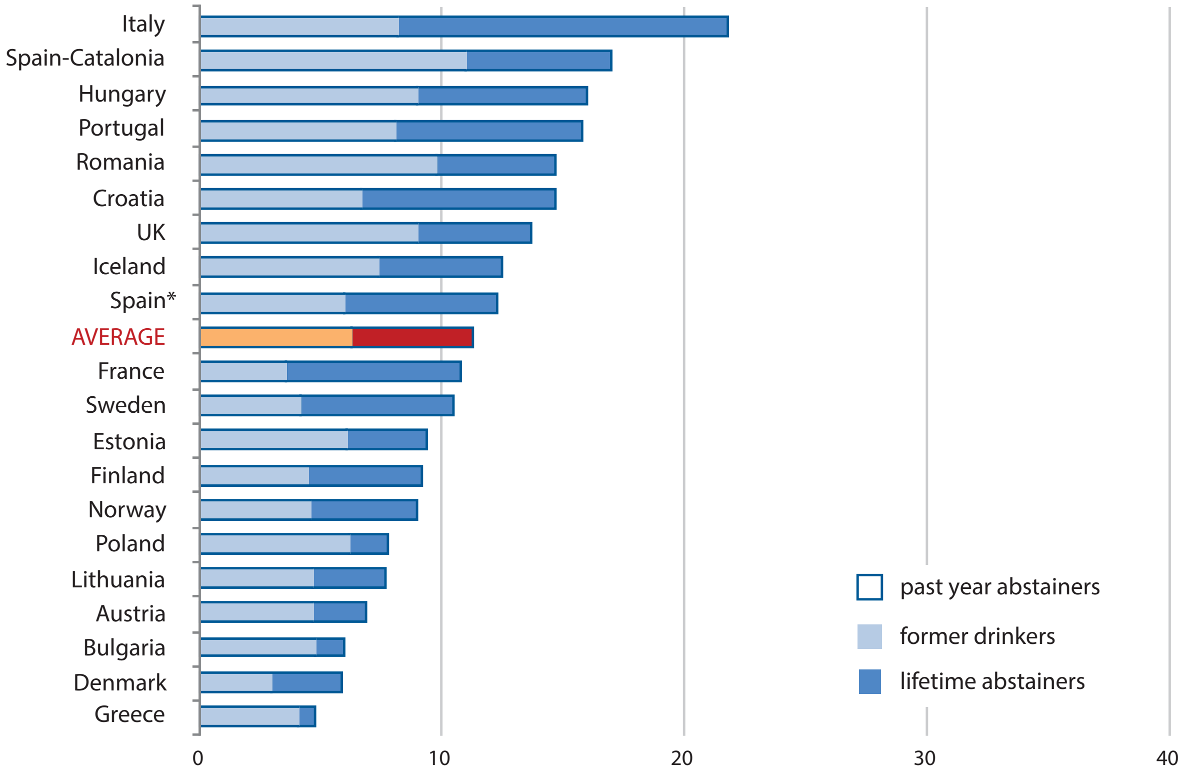
The percentage of former drinkers is generally also higher among women (9,1%) than men (6.4%) and gender differences are statistically significant in: Bulgaria, Romania, Hungary, Poland, Italy and Portugal.

Figure A3.1. 2. Prevalence of past year abstainers (%) among women



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.1. 3. Prevalence of past year abstainers (%) among men



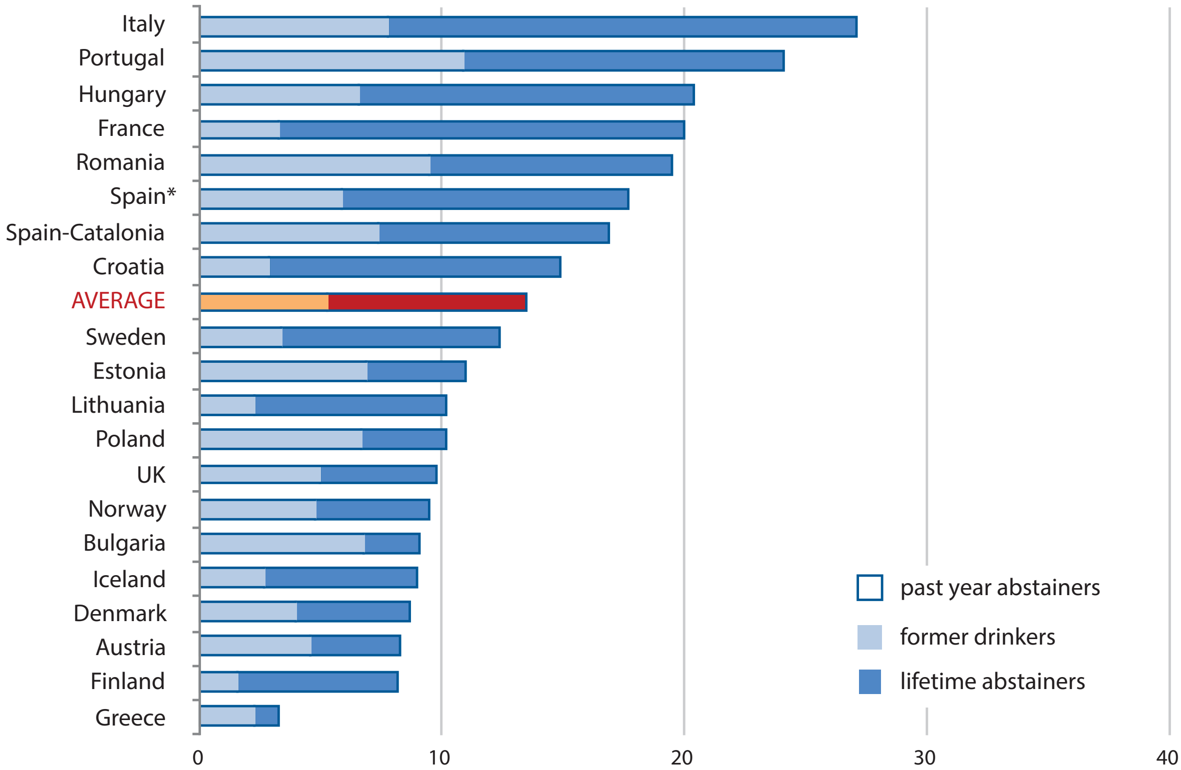
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The average rate of past year abstainers increases with age, ranging from 13.6% of the youngest participants (age 18–34) to 14.9% of the middle age group (age 35–49) and 18.1% of the oldest group (age 50–64). This tendency is statistically significant in Southern Europe: Croatia, Greece, Portugal, Romania, Spain-Catalonia, but also in Poland, and UK. A statistically significant decrease is observed in France, where the percentage of past year abstainers is the highest in the youngest group (20.1%), and decreases by age.

On average, the percentage of lifetime abstainers is 8.2% in the youngest group (18–34 years) and decreases to 7.4%–7.5% in following age groups (35–65 years). There is a statistical difference among lifetime abstainers by age groups in only three countries: in France there are more lifetime abstainers in the youngest age group (16.7%), followed by the middle-age respondents (9.2%) and the older ones (5.1%); in contrast, in Portugal, the percentage is highest among the oldest respondents (20.1%), decreases to 13.9% in the middle age group (35–49 year olds) and it is the lowest among the youngest people (13.2%). In Lithuania the lowest rate is observed among the middle age group (2.7% of lifetime abstainers) while in the younger groups it is 7.9% and in the older 5.4%.

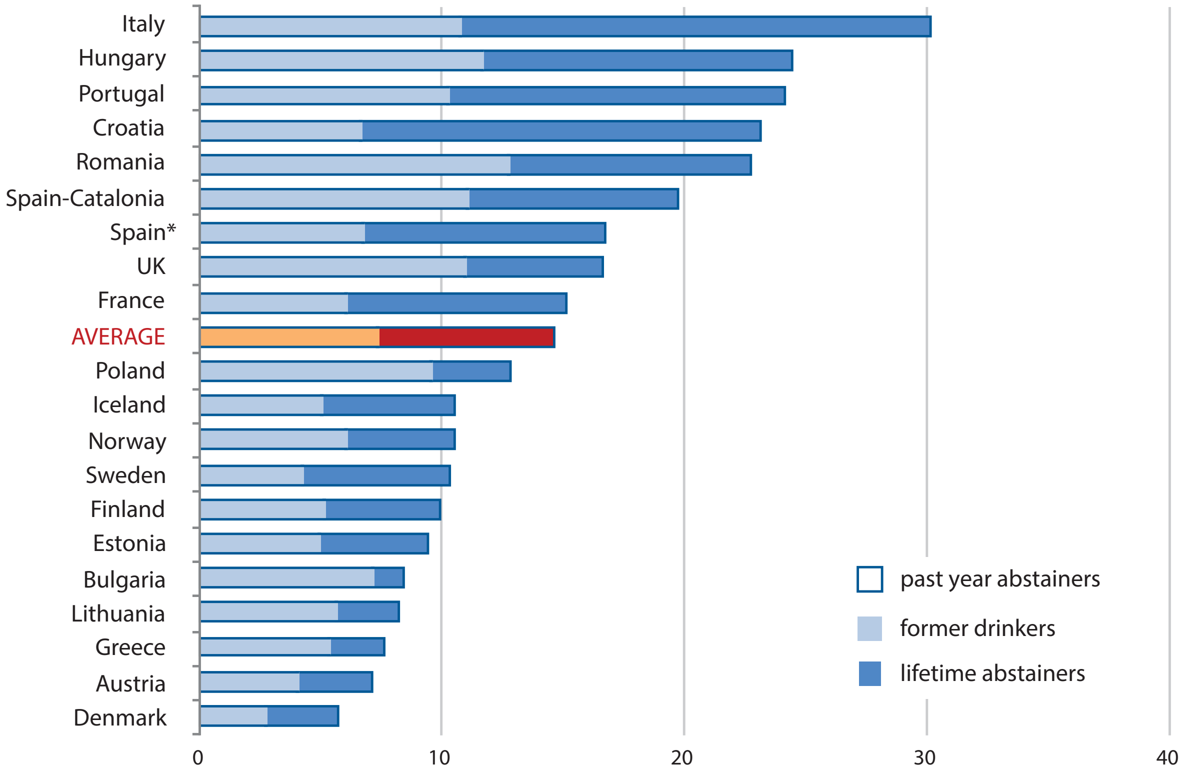
On average, the prevalence of former drinkers is 5.4% in the youngest group (18–34 years), increases to 7.5% in the middle age group and reaches the value of 10.6% in the 50–64 age group. This trend was found to be statistically significant in 11 out of the 20 surveys, namely in Croatia, Finland, Greece, Hungary, Iceland, Italy, Lithuania, Poland, Romania, Spain-Catalonia and UK.

Figure A3.1. 4. Prevalence of past year abstainers (%)in age group 18–34



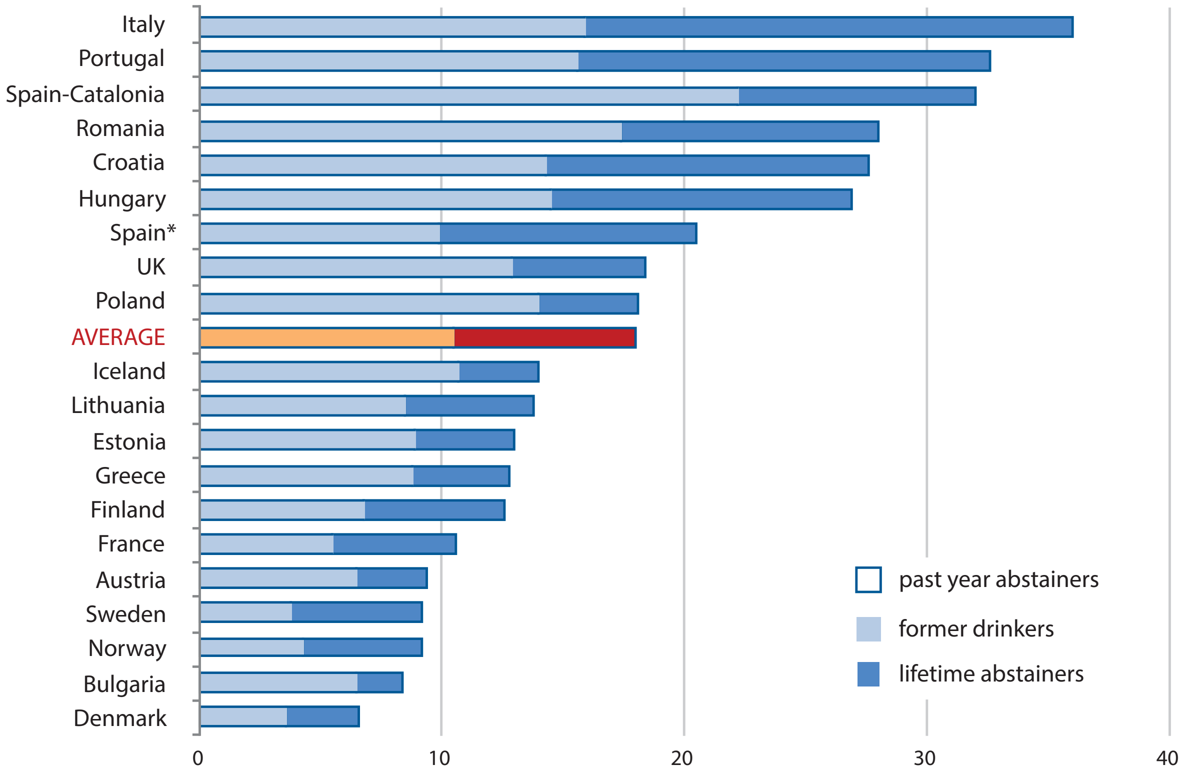
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.1. 5. Prevalence of past year abstainers (%) in age group 35–49



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.1. 6. Prevalence of past year abstainers (%) in age group 50+



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Discussion

The SEAS survey allows assessment of the general indicator of alcohol abstinence in the past year, as well as its two components: life-time abstinence and former drinkers (defined as not drinking in the past year but drinking earlier). As the SEAS results show, each of these measures leads to different conclusions about cross gender and age differences in the prevalence of abstinence.

Generally, the SEAS confirmed previous results (Hemström et al., 2001; Rehm et al., 2004; Babor et al. 2010) on cross-gender differences in the prevalence of abstaining from alcohol: a greater proportion of abstainers has been found among women than among men in terms of lifetime, as well as present (within the past 12 months) abstinence. These differences, however, are more visible in the group of those who are lifetime abstainers than among those who have not drank alcohol in the past year but have been drinking earlier.

Also, in general, the SEAS study confirmed that the proportion of abstainers increases with age. However, this is due uniquely to cross-age differences in the prevalence of former drinkers (in the past year but not in the lifetime). There are no differences associated with respondents' age in lifetime abstinence rates (besides France, Portugal and Lithuania).

It is difficult to compare the SEAS results on the prevalence of alcohol abstinence in different countries with results from earlier surveys mainly due to differences in the age of studies' participants and to different methodology of sampling and data collection. In the SEAS project only the adult population (age 18–64) was included. In the literature, for example, in the WHO reports on alcohol and health (2014) and comparative quantification of health risks (Rehm, 2004), data from samples of respondents 15 years old and older are presented. There are also reviews where the age of the studied population is not defined (e.g. Anderson et al., 2012). From the perspective of legal restrictions on alcohol purchase and age differences in the prevalence of abstinence, a clear definition of the studied population age is crucial for any data comparisons.

References

Anderson P. et al. (2012). Alcohol in the European Union, World Health Organization

Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., et al. (2010). Alcohol: No Ordinary Commodity – Research and Public Policy. 2nd ed. Oxford: Oxford University Press.

Hemström Ö., Leifman H. & Ramstedt M. (2001).The ECAS-survey on drinking patterns and alcohol-related problems [in:] Norstrom T. (ed) Alcohol in post-war Europe. National institute of Public Health, 105–126.

Rehm J., Irving H., Ye Y., Kerr W. C., Bond J., Greenfield T. K. (2008) Are lifetime abstainers the best control group in alcohol epidemiology? On the stability and validity of reported lifetime abstention. Am J Epidemiol 2008; 168: 866–71.

Rehm J., Room R., Monteiro M., Gmel G., Graham K., Rehn N., Sempos C.T., Frick U., Jernigan D. (2004). Alcohol use. In: Ezzati M. et al. Comparative quantification of health risks : global and regional burden of disease attributable to selected major risk factors, Geneva, World Health Organization

Rehm J, Scafato E. (2011). Indicators of alcohol consumption and attributable harm for monitoring and surveillance in European Union countries. Addiction. 2011 Mar; 106 Suppl 1:4–10.

World Health Organization (2014), Global status report on alcohol and health 2014; (http://www.who.int/substance_abuse/publications/global_alcohol_report/en/).

A3.2 Motives for drinking and non-drinking

Paul Lemmens, Erika Vandlik and Zsuzsa Elekes

Introduction

Drinking behaviour is to some extent intentional behaviour. It is governed by cognitive evaluations of the effects of alcohol, which form the logical basis for conscious reasons for drinking. Effects of drinking, or, better, the perceived consequences of drinking are to a certain extent culturally determined, and in part they are based on personal experience. It has been found in Western societies that people already early in life form representations of the effects of alcohol in a variety of cognitive, physiological and emotional domains (e.g. Fossey, 1993). These representations are only rarely based on personal experience but more often on observations of, and transference of, beliefs from the adult and peer worlds. In pre-puberty, alcohol use is strongly negatively valued. Around puberty, evaluation of alcohol starts to shift, and expectancies become modified more and more by personal experience (Wiers et al., 1997). Expectancies about the effects of alcohol determine drinking behaviour to a certain degree. This has been shown especially for young drinkers.

As with many human behaviours, also drinking and alcohol expectancies are formed in a reciprocal process, as expectancies are shaped more and more by personal experience. The perceived effects of alcohol are not entirely pharmacologically based. Research has shown that effects of drinking, particularly as regards tension reduction, are determined by cognitive, expected effects rather than the pharmacological effects of alcohol (Blane & Leonard, 1999). In other words, alcohol has a high placebo value. Since alcohol is widely available, one would expect, and there is indeed empirical support for this assumption, that the more positive expectancies a person has, the higher his/her consumption.

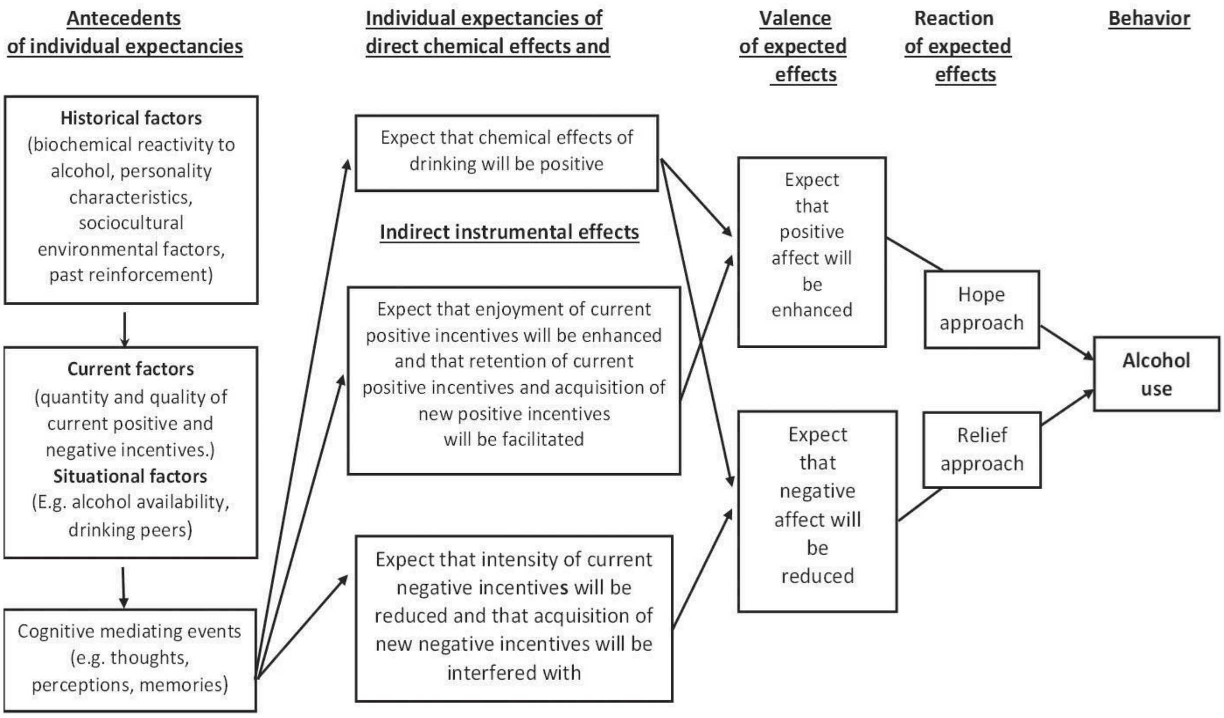
In general, expectancies appear to be dynamic, depending upon the dose considered, with positive expectancies more probable at moderate levels; negative expectancies seem to take over with heavy drinking. To complicate matters further, it was recently found that moderate and heavy drinkers differ in expectancies of high and low doses (Wiers et al., 1997). Some have ascertained differences in general versus personal expectancies (Rohsenow, 1983), but other evidence suggested that the effect of perspective is small (Woods et al, 1992).

Reasons for drinking develop, of course, later in life, when people actually have access to alcoholic beverages or are culturally seen as fit for drinking alcoholic beverages. A general finding in the literature is that reasons or motives or motivations (we will not venture here into the classic discussion in motivational psychology) for drinking fall into two categories: to relax, unwind, or, generally, to reduce tension on the one hand, and, on the other hand, reasons connected to social events, such as celebrations, and disinhibition. The first factor concerns negative reinforcement, the second positive reinforcement. Psychologically one can expect, and it has also been found empirically, that the more one drinks, the more reasons one has to drink.

From a logical point of view, one could expect reasons for drinking and alcohol expectancies to be in some kind of rational balance. One of the first studies into the relationship between the two concepts was done by Leigh, in which moderate correlations between reason and expectancy items were found (Leigh, 1990). She reported that endorsement of an outcome expectancy is a condition for the related reason for drinking, suggesting an entailment model. In her discussion she interpreted drinking motives as culturally determined, socially acceptable justifications for drinking. Expectancies were less "attenuated" by social desirability.

In recent years, a consensus has built on the role of expectancies and motives for drinking. Work by Kuntsche (2007) builds on the Motivational Model of Cox and Klinger (1988). Essentially, this model assumes drinking motives as mediating factors between expectancies and drinking. Kuntsche suggests four distinct motive categories, determined by a 2 by 2 matrix, given by source (effects either internal or external) and valence (positive or negative expectancy). The four ensuing motive categories are enhancement, social, coping and conformity. In his study among Swiss adolescents, Kuntsche finds compelling proof for the idea that motives are mediating factors and most proximal to drinking behaviour. The four dimensions are: drinking to enhance positive mood or well-being (enhancement: positive, internal), to obtain social rewards (social: positive, external), to attenuate or to avoid negative emotions (coping: negative, internal), and to avoid social rejection (conformity: negative, external).

Figure A3.2.1. Assumptions of the Motivational Model (Cox & Klinger, 1988; copied from Kuntsche, 2007)



The general finding from studies on drinking motives and consumption level is that the higher the motivation, the higher the consumption, as already pointed out earlier. Drinking motives seem to be age-dependent, with one general factor early in the drinking career, and becoming structurally more complex as drinking behaviour develops through adolescence, with differentiation between boys and girls. It was found that social motives are not linked, while enhancement and coping motives are linked to heavy drinking (Kuntsche, 2007).

The proximity of motives for drinking to consumption makes the concept of drinking motives, and in this case also reasons for abstaining, well suited to assess the expectations and personal and cultural motivations and justifications for a person's drinking or abstention.

Drinking motives constructs have been operationalised in the Drinking Motive Questionnaire-R (Cooper, 1994). Although mostly applied to young populations, it has good psychometric properties. The full list was, however, not well suited for the current SEAS study due to its length. From the DMQ-R 8 items were selected. Two items on drinking for health reasons were added, as Dutch research among adults aged 45 years and over showed that this item was endorsed most frequently. In all, 10 items on drinking motives were included in the SEAS.

As populations differ in abstention rates, it was felt important also to assess reasons for abstaining from drinking alcoholic beverages. Motives for non-drinking have been studied mainly in adolescents (e.g. Strizke& Butt, 2001; Merill et al 2016). Main categories of reasons that are reported are fear of negative consequences, family and religious constraints, indifference, and incompatibilities (Strizke & Butt, 2001). In the SEAS, 16 items that relate to these effects are included. Adult people may refrain from drinking because they do not like the taste or the effects of alcohol, because of principled or religious reasons, because of ideas on the health effects (e.g. pregnancy), or because of bad experiences.

Methods

Motives for drinking (MD)

Questions MD

Measuring motives for drinking was an optional module of the RARHA main study questionnaire. Twelve surveys included the Motives for Drinking (MD) module: Bulgaria, Croatia, Estonia, Hungary, Iceland, Italy, Lithuania, Poland, Portugal, Spain, Spain-Catalonia[1], Portugal and Sweden. Items were asked only from those respondents who reported at least one drinking occasion in the last 12 months. Answers were received from 16223 respondents, comprising 49.3% of the total SEAS sample.

Participants were asked to report how often they drank for the particular reasons in the past 12 months when they drank. Ten possible reasons were asked to measure motives of drinking:

- because you like the feeling after having a drink
- because it's fun
- because it improves parties and celebrations
- just to get drunk
- to fit in with a group you like
- so you won't feel left out [with others]
- because it helps you when you feel depressed
- because you think it is healthy
- to forget about everything
- because it is a part of good diet

Respondents were asked to express the frequency of drinking for each reason on a five-point scale from never to always in response to each of the above statements.

Frequencies MD

First, frequencies for each item were computed. Of all respondents, 16.8% did not reply to these questions as they did not drink in the last 12 months and were coded as "does not apply". The proportion of "no answers" was low, ranging between 3.1% and 4.7%. To analyse differences, responses "always" and "most of the time" were added to each other.

Factor analyses MD

To identify underlying variables factor analysis was performed with principal component analyses, using Varimax with Kaiser Normalization rotation method. The component matrix explained 70.62% of the total variance. KMO=0.754, Bartlett's test sig.=0.000.

Motives for not drinking, abstaining (MND)

Questions

In all, 15 questions on potential reasons for abstention were included. The questions were asked in 16 surveys: Austria, Bulgaria, Croatia, Estonia, France, Denmark, Greece, Hungary, Iceland, Lithuania, Poland, Portugal, Romania, Spain, Spain-Catalonia, Portugal and the UK.

Items were asked only of participants who are either lifetime abstainers or not drinking during the past 12 months. The format of the answer to each item was a mere yes or no.

The text of the questions read as follows:

- I have no interest in drinking
- I have seen bad examples of what alcohol could do
- Drinking is against my religion
- I was brought up not to drink
- Drinking is too expensive
- Drinking is a waste of money
- Drinking is bad for your health

[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

- My health is bad, and I can't drink;
- I can't drink because I am taking medication;
- I don't like the taste of alcohol;
- I don't like the effect of alcohol on me;
- I've been hurt by someone else's drinking;
- Drinking would have a bad effect on my activities;
- I am afraid I would have problems with alcohol or be an alcoholic if I drank;
- Previously my drinking already harmed my life;
- I am pregnant or trying to get pregnant *(females only)*.

Results

Motives for drinking (MD)

Overall frequencies of individual motives MD

Respondents most frequently drink because it 'improves parties and celebrations' (27.1% answered always or most of the time), because they 'like the feeling' (20.5% answered always or most of the time) and 'because it's fun'. Only a small proportion of respondents drink frequently because of other motives. Fewer than 20% of all drinkers ever drink for a reason "just to get drunk". Other less frequent motives are "to forget about everything" and "because it is part of a good diet" (table A3.2.1).

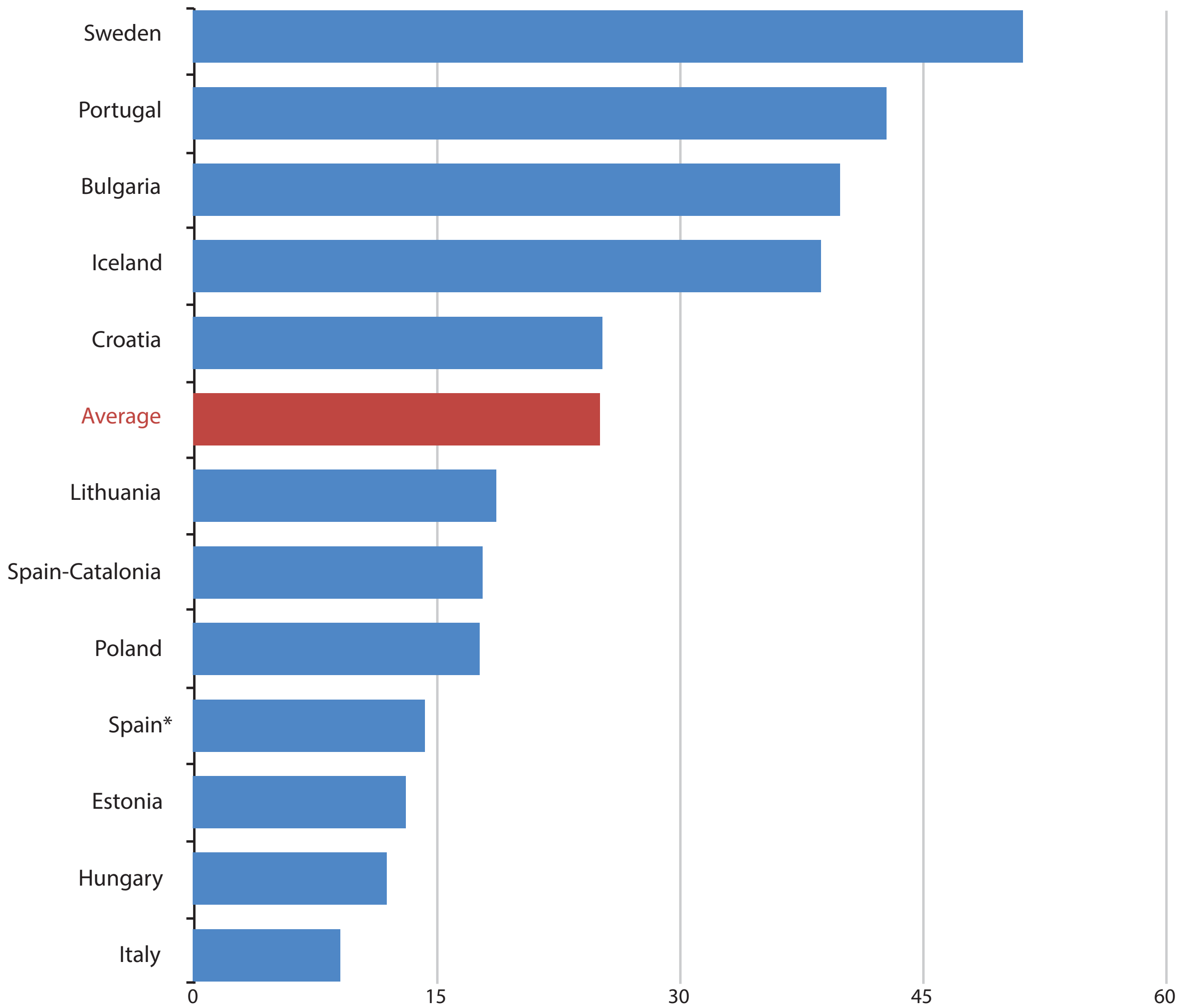
Table A3.2.1. Motives for drinking among those who drank in the last 12 months

	Never	Rarely	About half of the time	Most of the time	Always	No answer
MD_1. because you like the feeling after having a drink	35.6	25.9	10.2	16.4	7.9	4.0
MD_2. because it's fun	32.7	26.7	12.3	16.7	7.3	4.4
MD_3. because it improves parties and celebrations	23.2	26.5	14.3	22.6	9.8	3.7
MD_4. just to get drunk	78.6	11.1	3.1	1.7	0.8	4.8
MD_5. to fit in with a group you like	59.0	20.5	7.7	6.4	1.9	4.4
MD_6. so you won't feel left out [with others]	66.9	16.9	5.9	4.6	1.4	4.3
MD_7. because it helps you when you feel depressed	68.0	19.1	4.7	2.8	1.1	4.3
MD_8. because you think it is healthy	66.8	18.2	4.8	3.9	1.8	4.4
MD_9. to forget about everything	75.6	13.9	3.0	2.3	0.9	4.4
MD_10. because it is a part of good diet	73.0	11.2	4.4	4.1	1.7	5.6

Motives by countries

Proportions of those who answered “always” or “most of the time” considerably differ by individual surveys (Figure A3.2.2). The ’good feeling’ caused by alcohol (MD1) is the most frequent motive in Sweden, with 43.1% of respondents answering “always” or “most of the time”, while in Italy only 6.1% of respondents gave this answer. Countries where this reason is a more than average frequent motive for drinking are Sweden, Bulgaria, Iceland and Portugal.

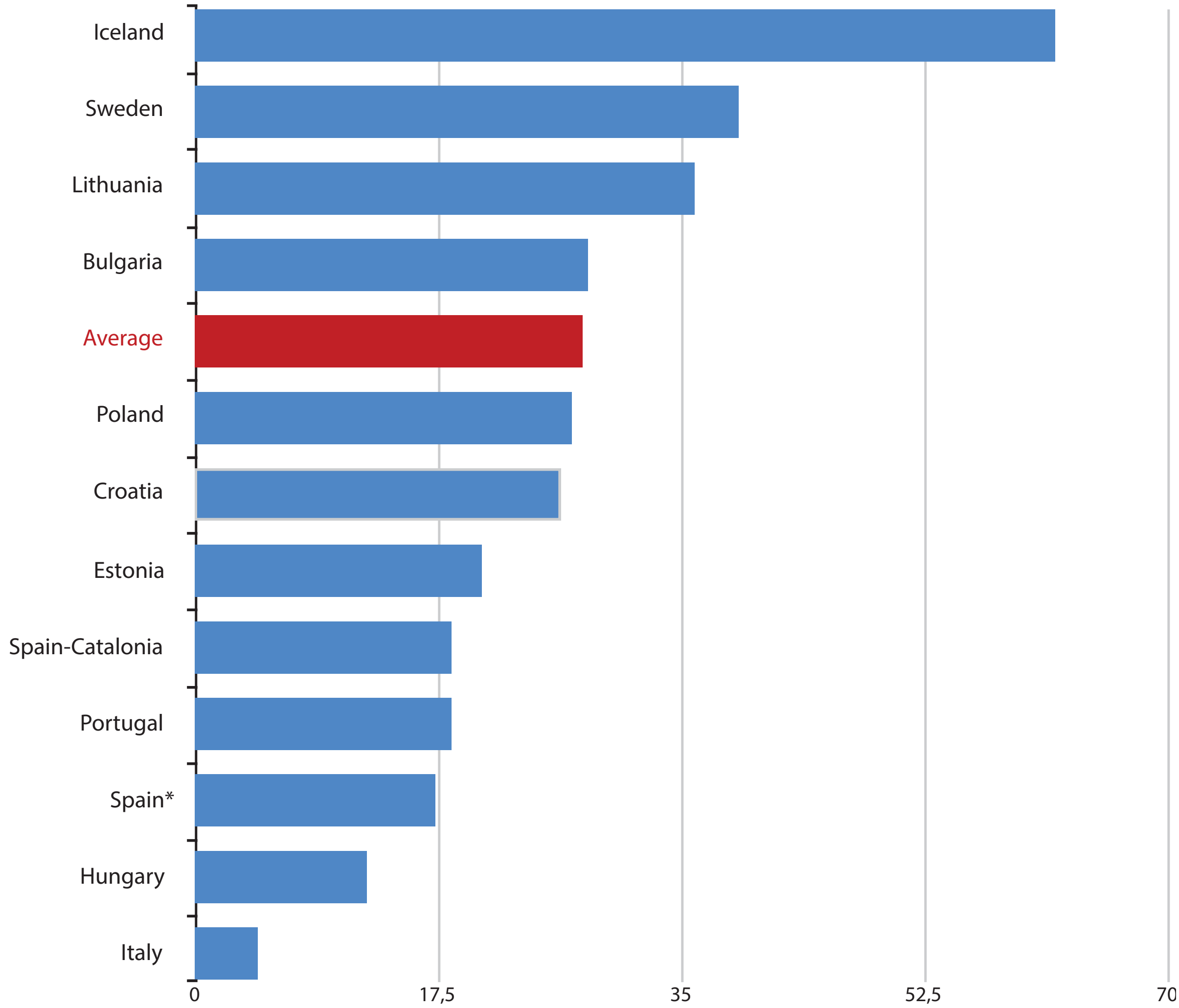
Figure A3.2.2. Motives for drinking among those who drank in the last 12 months: because you like the feeling after having a drink (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Again important differences were found in the proportion of those who drink alcohol always or most of the time because 'it is fun' (MD2; Figure A3.2.3). This motive was mentioned in the highest proportion in some Northern countries (Iceland, Sweden and Lithuania), while in several southern countries (Italy, Hungary, Spain, Portugal) being fun rarely appears as a reason for drinking.

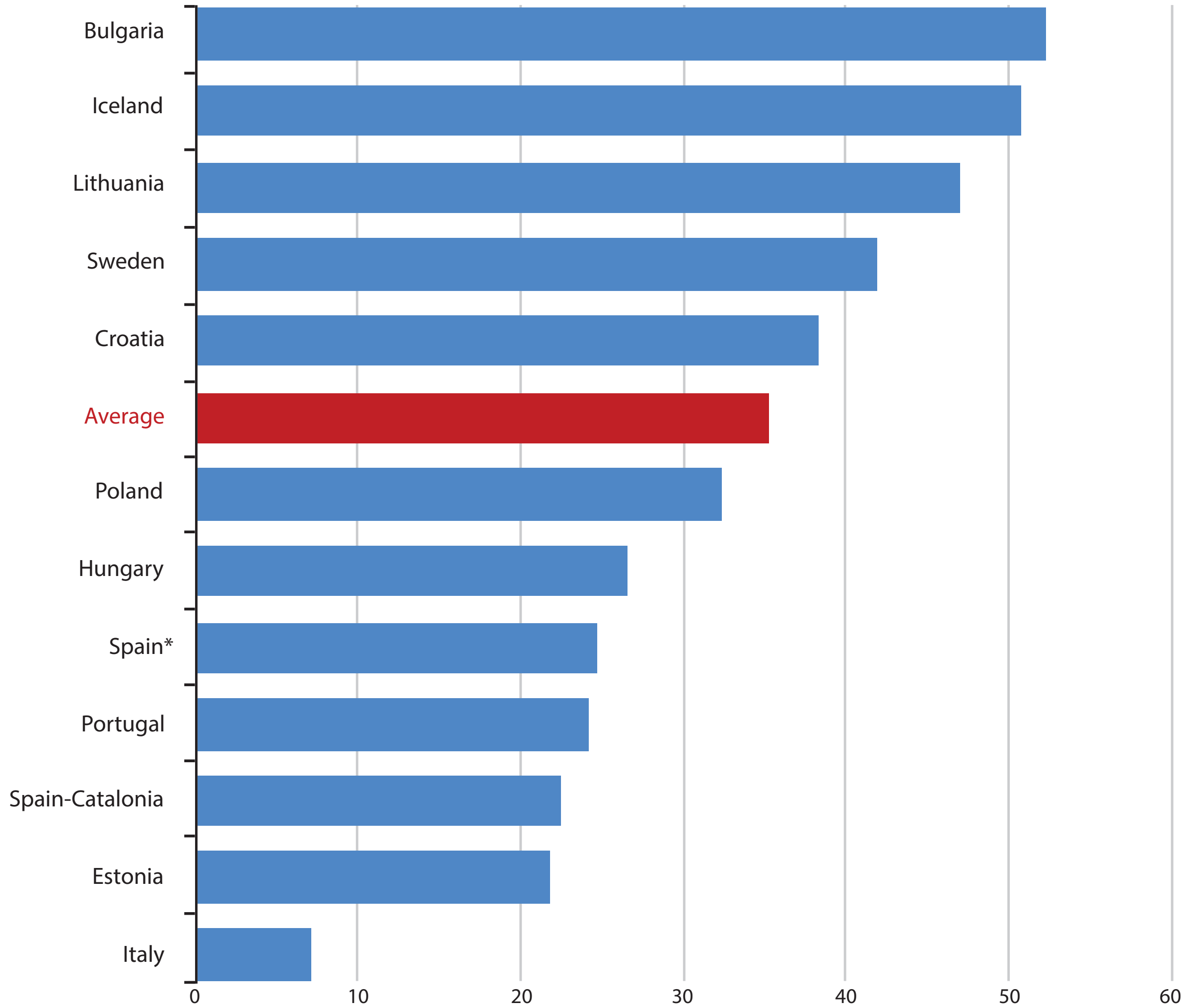
Figure A3.2.3. Motives for drinking among those who drank in the last 12 months: because it's fun (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The proportion of those who drink alcohol always or most of the time because 'it improves celebrations' (MD3) varies between 52.3% (Bulgaria) and 7% (Italy) (Figure A3.2.4). Countries where participants most frequently drink because of parties and celebration are Bulgaria, Iceland, and Lithuania. Countries where this motive is a less frequent reason for drinking are: Italy, Estonia, Portugal, Spain and Hungary.

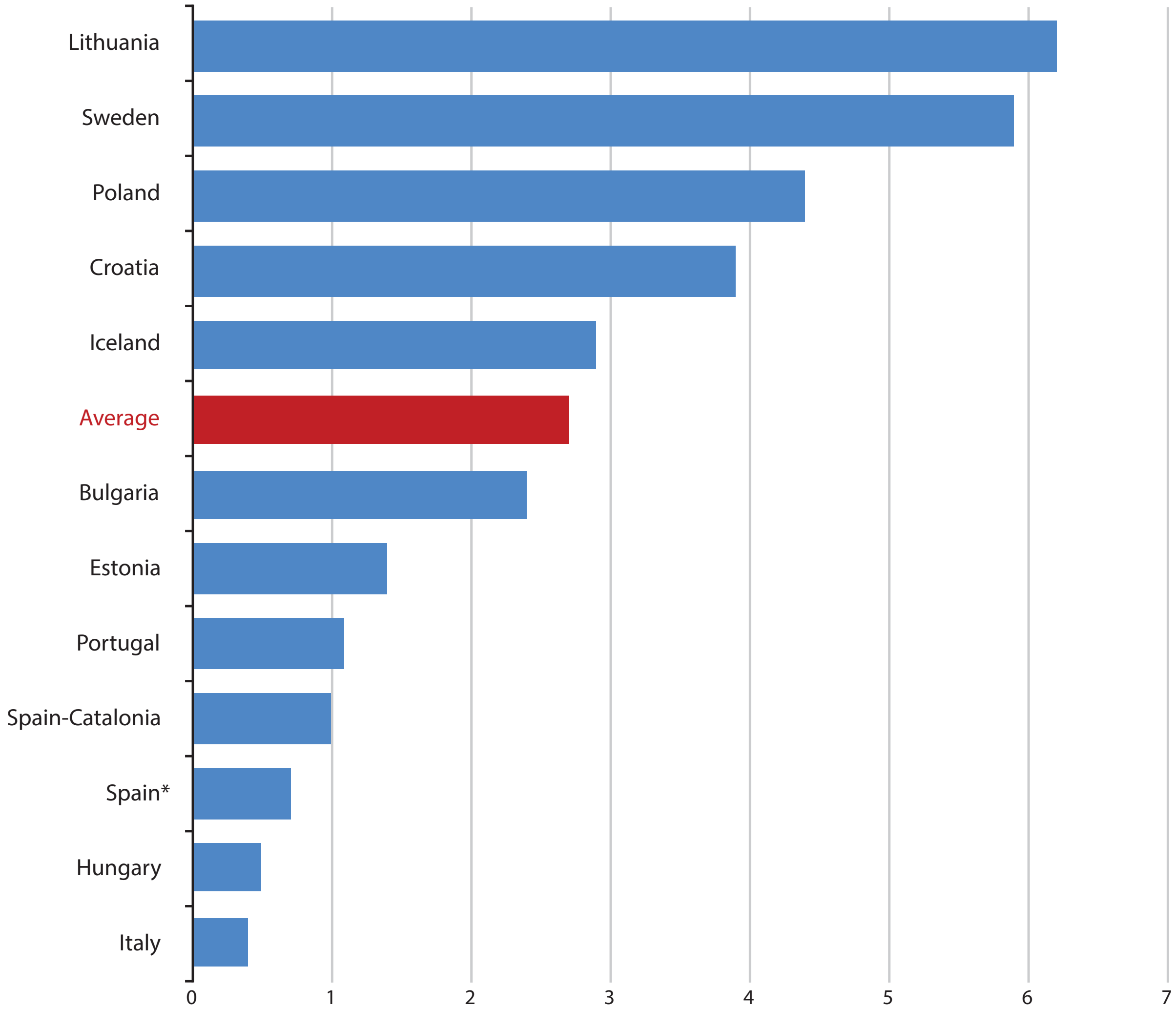
Figure A3.2.4. Motives for drinking among those who drank in the last 12 months: because it improves parties and celebrations (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Drinking for getting drunk (MD4) belongs to the least frequent reasons for drinking in all participating countries (Figure A3.2.5). Proportion of 'always" and most of the time" answers varies between 6.2% (Lithuania) and 0.4% (Italy). Above average are mostly those countries where a spirits based consumption pattern used traditionally to prevail.

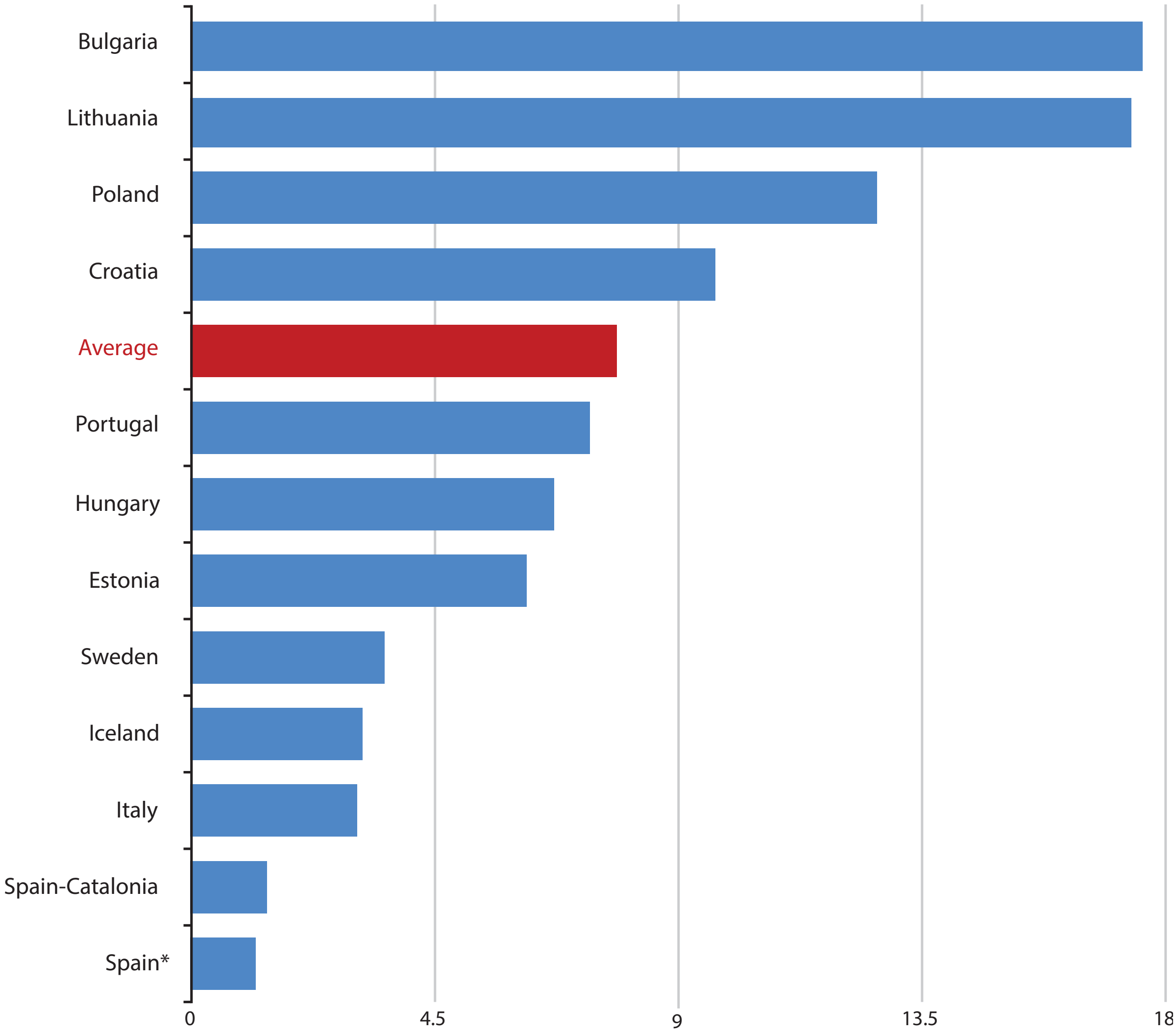
Figure A3.2.5. Motives for drinking among those who drank in the last 12 months: just to get drunk (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The frequency of the reason to fit in with a group (MD5) as a motive for drinking also differs considerably by countries (Figure A3.2.6). Higher proportions of respondents mentioned this motive as a frequent reason of drinking in Bulgaria,Lithuania and Poland. In some other countries (Spain, Italy, Iceland) only a very small proportion of respondents drink for this reason.

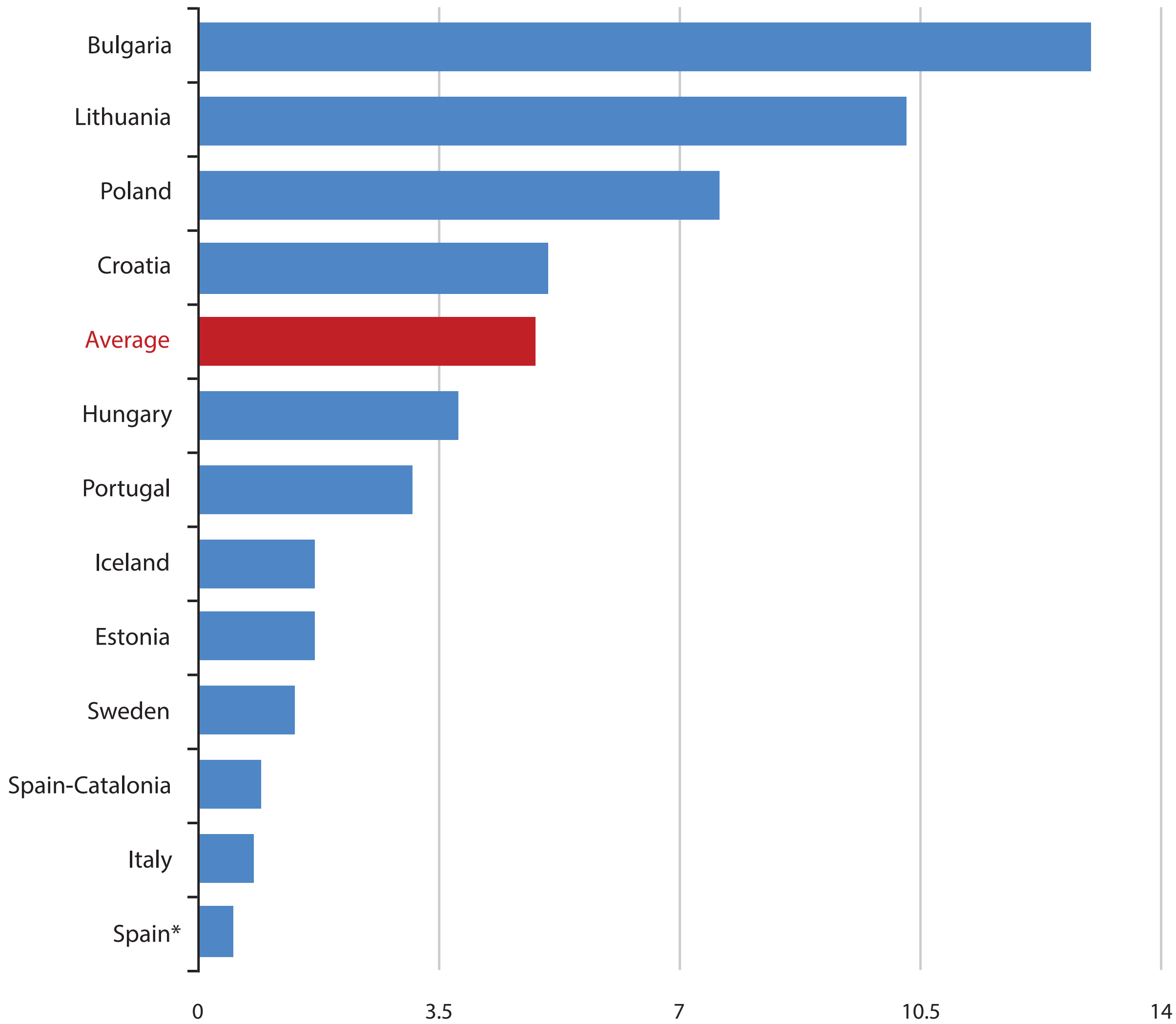
Figure A3.2.6. Motives for drinking among those who drank in the last 12 months: to fit in with a group you like (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

"Not feeling left out" (Figure A3.2.7) is a frequent motive in the very same countries where "fitting in with a group" was a relatively frequent reason for drinking (Bulgaria, Lithuania, Poland, Croatia). The proportion of "always" and "most of the time" answers varies between 16.7% (Bulgaria) and 0.7% (Spain).

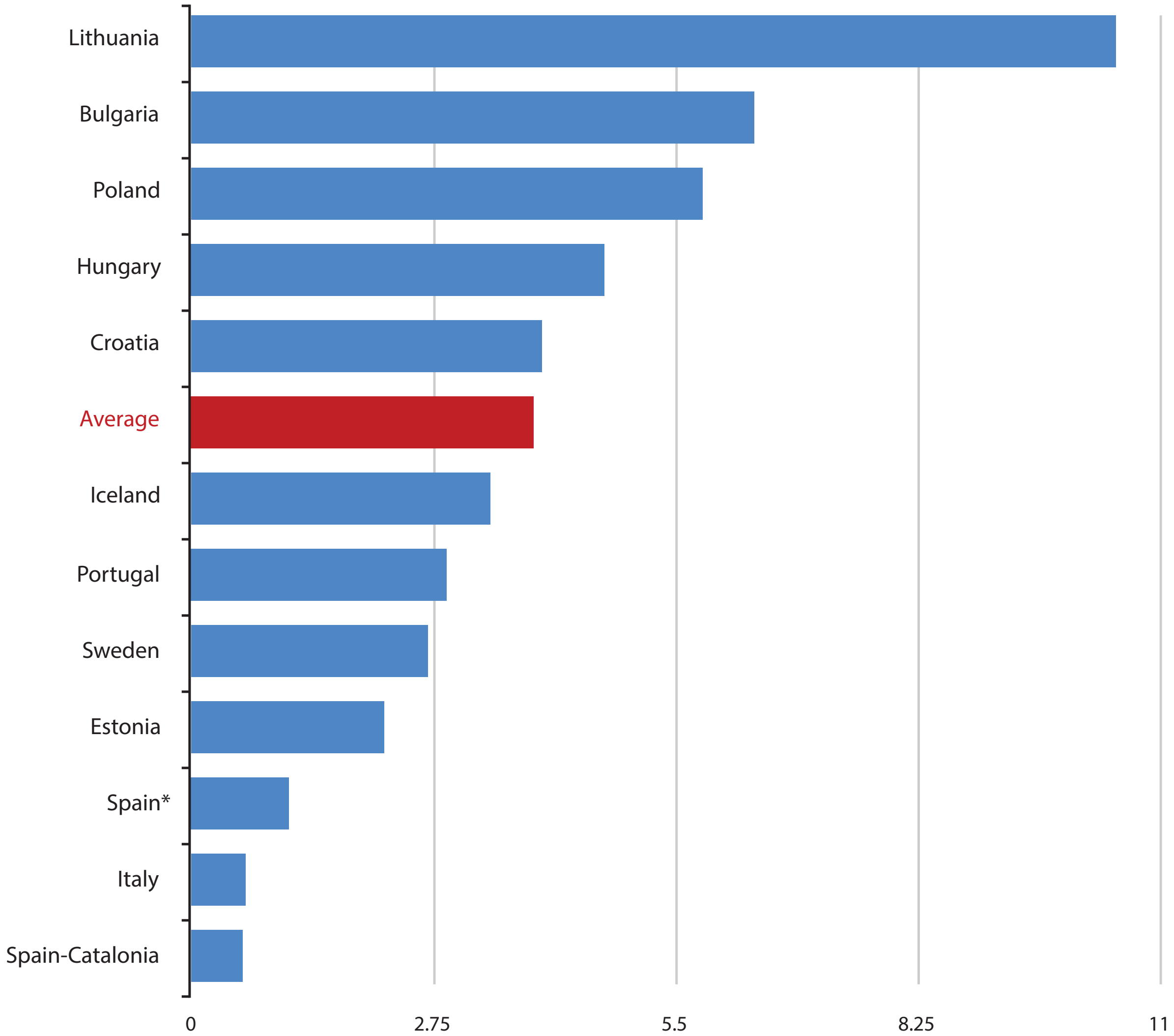
Figure A3.2.7. Motives for drinking among those who drank in the last 12 months: so you won't feel left out [with others]? (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Reducing depression (MD7) belongs to the least frequent motives for drinking in most participating countries (figure A3.2.8). The proportion of always and most of the time answers range from 10.5% (Lithuania) to 0.6% (Italy).

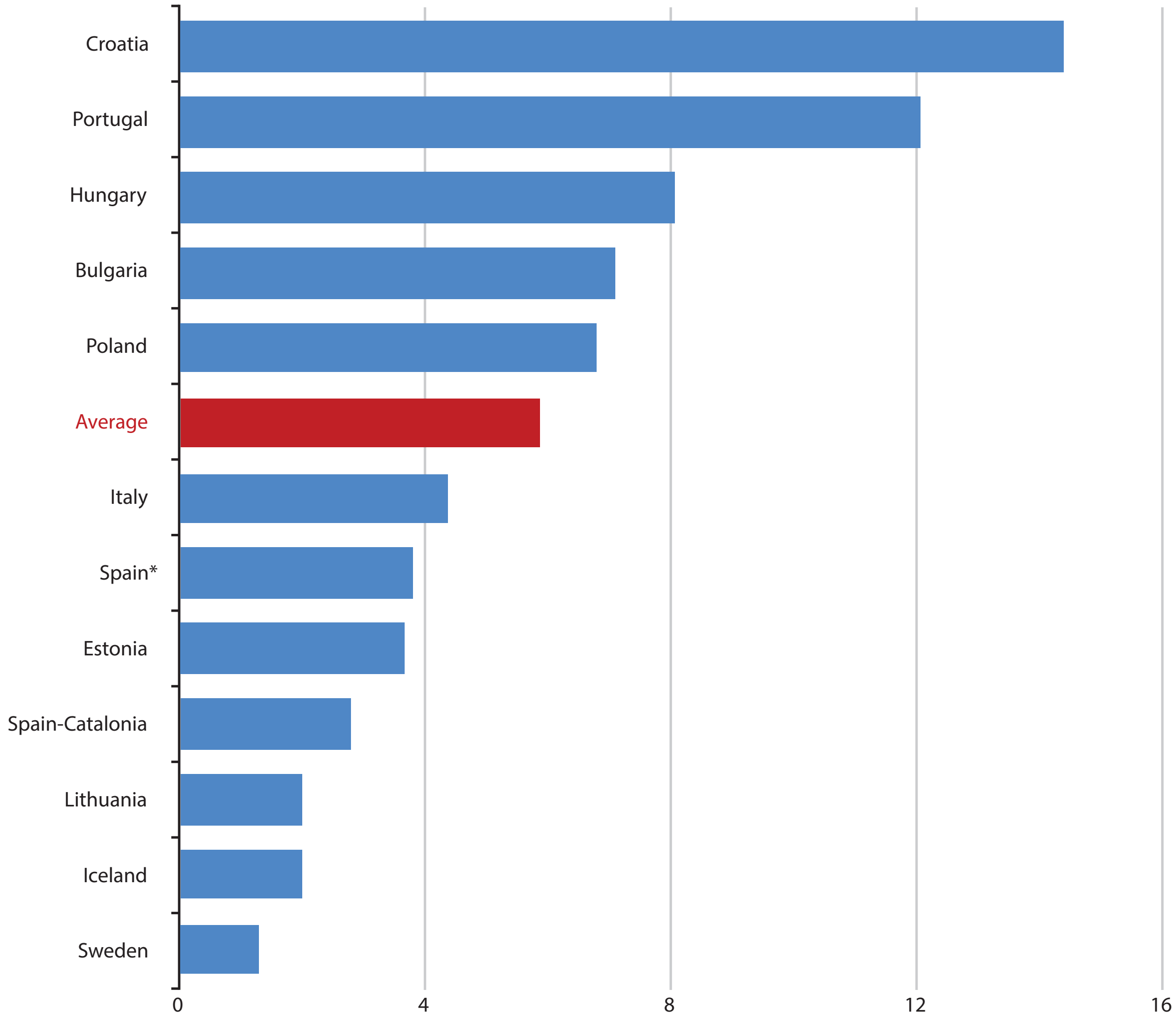
Figure A3.2.8. Motives for drinking among those who drank in the last 12 months: because it helps you when you feel depressed (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

“Drinking is healthy” (MD8) as a reason for drinking also rarely appears among the frequent motives for alcohol consumption. The proportion varies between 14.4% (Croatia) and 1.3% (Sweden). Higher proportions of respondents drink frequently because of this reason in Croatia and Portugal. The lowest proportions were found in Sweden, Iceland, Lithuania and Spain-Catalonia.

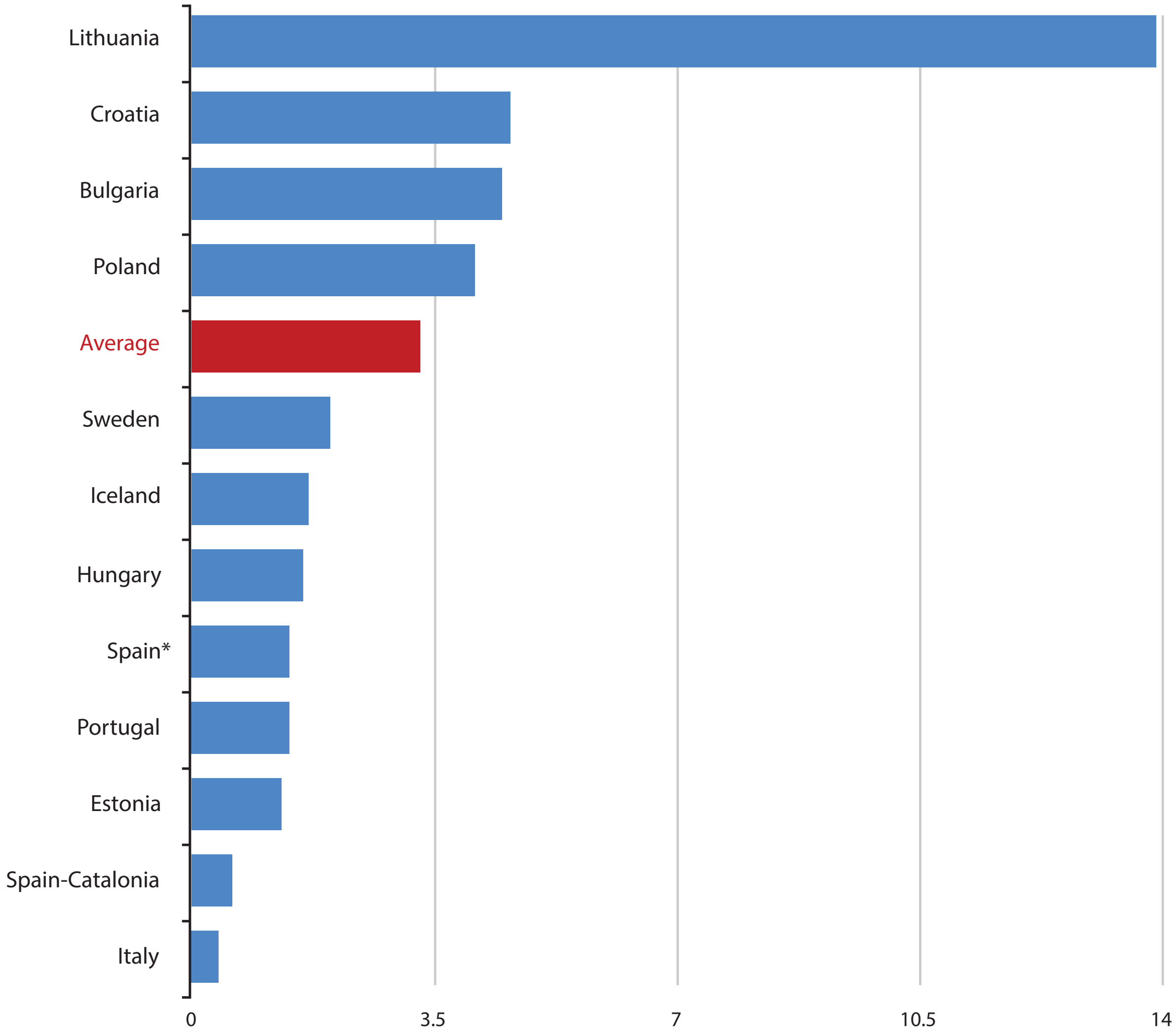
Figure A3.2.9. Motives for drinking among those who drank in the last 12 months: because you think it is healthy (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

In most participating countries less than 5% of respondents drink always or most of the time "to forget about everything" (MD9; Figure A3.2.10.). The only exception is Lithuania, where 13.9% of respondents drink frequently because of this reason.

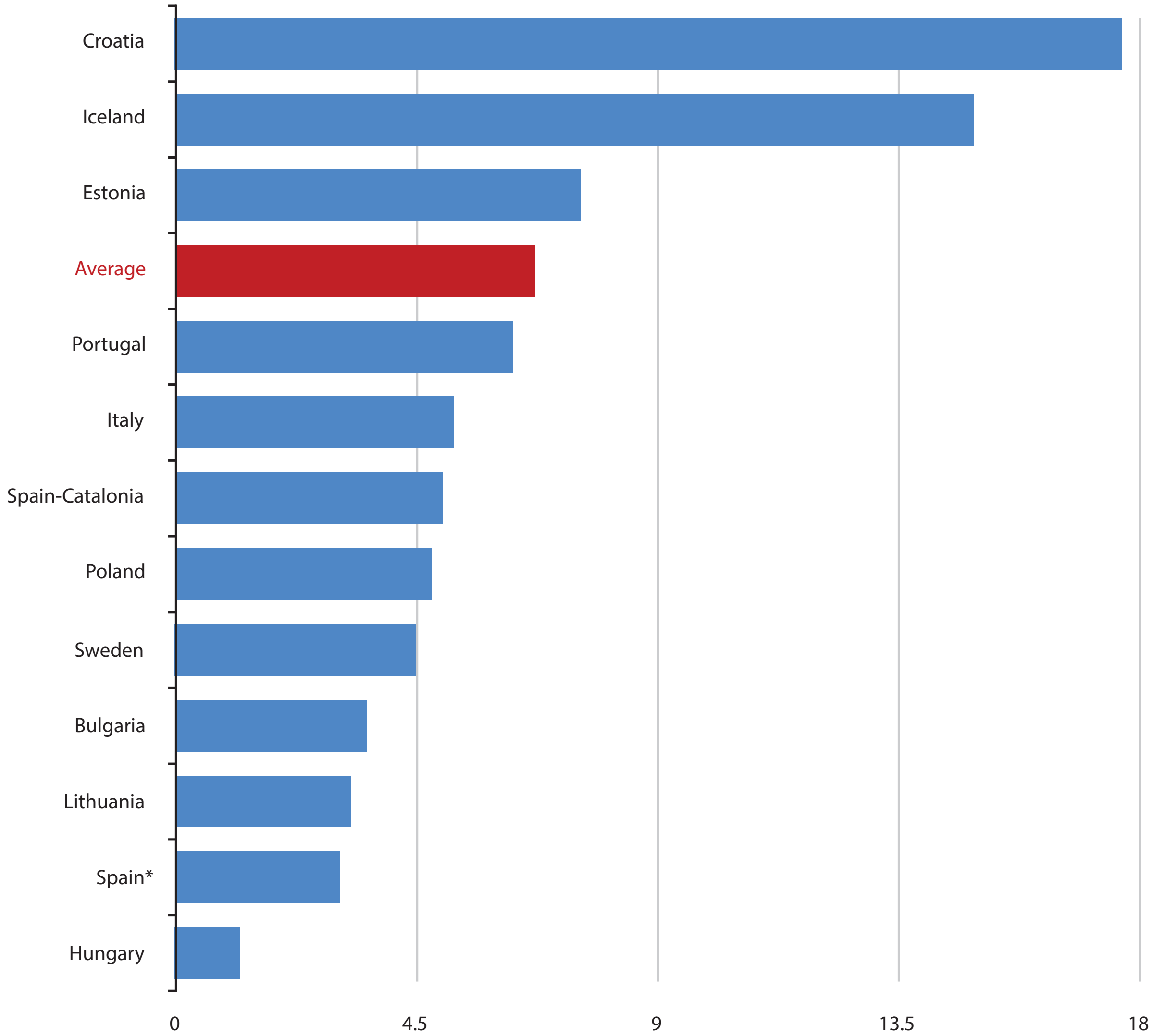
Figure A3.2.10. Motives for drinking among those who drank in the last 12 months: to forget about everything (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Proportion of those who drink always or most of the time because "alcohol is a part of a good diet" (MD10; Figure A3.2.11) varies between 17.7% (Croatia) and 1.2% (Hungary). Higher proportions were reported only in Croatia and Iceland 17.7% and 14.9% respectively.

Figure A3.2.11. Motives for drinking among those who drank in the last 12 months: because it is a part of good diet (proportion of answers always and most of the time)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Factor analysis, typology, cluster of items

As can be seen from the table below four factors emerged in factor analysis for motives for drinking.

1. **Pleasure** as a motive for drinking, including the feeling after having a drink and drinking because it is fun.
2. **Problems** as motives for drinking, including to forget everything, just to get drunk and to help with depressed mood.
3. **Fitting in with others,** including fitting in with a group and not feeling left out.
4. **Healthiness,** including part of a good diet and it is healthy.

Table A3.2.2. Factor scores (rotated component matrix) of 10 reasons for drinking in 11 EU countries

	pleasure	problem	fit to others	healthy
Because you like the feeling after having a drink?	0.770	0.182	0.001	0.126
Because it's fun	0.852	0.166	0.086	0.009
Because it improves parties and celebrations	0.755	0.082	0.278	-0.020
Just to get drunk?	0.298	0.652	0.060	-0.021
To fit in with a group you like?	0.166	0.147	0.867	0.050
So you won't feel left out [with others]?	0.108	0.241	0.849	0.062
Because it helps you when you feel depressed	0.105	0.778	0.242	0.131
Because you think it is healthy?	0.056	0.073	0.115	0.839
To forget about everything	0.075	0.845	0.156	0.090
Because it is a part of good diet	0.030	0.070	-0.015	0.846

Extraction Method: Principal Component Analysis.
a.Rotation converged in 5 iterations.
Rotation Method: Varimax with Kaiser Normalization.

Motives for not drinking, abstaining (MND)

Overall frequencies of individual motives of non-drinking

There is quite some variability in the number of non-drinking respondents endorsing the individual items (table A3.2.3, rightmost column). The highest score is for the 'drinking is bad for my health' (85%), followed by indifference (80%), and having seen 'bad examples of what alcohol could do' (71%). The lowest score is for the item 'previously my drinking already harmed my life' (13%), followed by the item about religious objections (15%) and incompatibility with medication (21%). One of the possible explanations for the lowest score for the item "previously my drinking already harmed my life" is that it is more relevant for a group of former drinkers rather than life-time abstainers" .

Table A3.2.3. Respondents endorsing affirmatively the items inquiring about reasons for not drinking (rounded percentages)

Motive for Not Drinking items	Percentages															
	Austria	Bulgaria	Croatia	Denmark	Estonia	France	Greece	Hungary	Iceland	Lithuania	Poland	Portugal	Romania	Spain*	Spain-Catalonia	UK	**Average**
I have no interest in drinking	84	96	89	69	87	80	85	79	91	96	77	87	55	65	62	76	**80**
I have seen bad examplesof what alcohol could do	65	86	89	68	79	75	65	70	89	83	51	71	80	44	40	76	**71**
Drinking is against my religion	15	14	20	22	13	31	1	5	4	33	13	21	21	5	3	16	**15**
I was brought up not to drink	27	73	64	22	32	38	55	69	19	62	35	59	50	23	23	16	**46**
Drinking is too expensive	43	56	75	27	45	33	39	73	41	72	34	78	45	33	25	21	**51**
Drinking is a waste of money	65	81	84	45	68	64	58	81	62	90	57	83	73	57	42	55	**70**
Drinking is bad for your health	82	94	95	70	89	85	84	80	90	87	77	89	92	79	65	76	**85**
My health is bad, and I can't drink	18	15	26	23	17	14	21	22	11	26	38	28	36	12	25	22	**23**
I can't drink because I am taking medication	16	15	25	18	14	11	18	23	8	27	37	26	31	13	27	18	**21**
I don't like the taste of alcohol	63	91	69	33	64	57	77	61	40	73	57	69	59	58	63	38	**63**
I don't like the effect of alcohol on me	64	72	45	48	60	58	70	68	62	60	62	48	58	34	45	57	**57**
I've been hurt by someone else's drinking	16	16	31	38	42	37	36	3	35	15	22	16	35	20	18	31	**23**
Drinking would have a bad effect on my activities	39	77	54	48	57	61	70	46	76	52	47	45	65	44	40	57	**53**
I am afraid I would have problems with alcohol or be an alcoholic if I drank	23	16	13	21	18	34	34	11	43	37	26	16	36	14	18	22	**22**
Previously my drinking already harmed my life	19	14	15	19	16	6	5	9	40	22	10	10	13	5	16	13	**13**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Comparing individual surveys, it was found that the reason given for abstinence, 'I have no interest in drinking', has the highest score in Bulgaria and Lithuania (96%), followed by Croatia (89%), Estonia and Portugal (87%). Romania has the lowest rate, as roughly half (55%) of the respondents give 'not interested in drinking' as a motivation for abstinence. The scores between surveys vary less on the item 'drinking is bad for your health'. Four countries, Croatia, Bulgaria, Romania and Iceland have a score 90% or above and the lowest value was given in survey from Spain-Catalonia (65%). Iceland gave the highest scores (40%) followed by Lithuania (22%) on the item 'Drinking already harmed my life' and half of the countries (8) scored above the average (>13).

In the case of items 'My health is bad, and I can't drink' and 'I can't drink because I am taking medication' the highest scores were reported by Poland (38% and 37%, respectively) and Romania (36% and 31%, respectively), and the lowest scores were given by Iceland (11% and 8%, respectively).

Scores on the items 'I don't like the effect of alcohol on me' and 'Drinking would have a bad effect on my activities' are the showing the least variability. The highest scores for both of them were given by Bulgaria (72% and 77%, respectively), for the former item the lowest score was presented by Spain (34%) and for the latter one by Austria (39).

For the other items, differences between lowest and highest scores vary. The ratio high/low amounts to about 2 to 4. Bulgaria and Croatia show relatively high endorsement rates, with Spain showing relatively low scores.

Factor analysis

In table A3.2.4, the results of the factor analysis are presented. Four factors seem to emerge that could be termed as follows:

1. bad experiences with alcohol, either personal or in others;
2. an indifference to the lure of alcohol, rejection of alcoholic beverages as a health threat;
3. rejection for principled or economic reasons;
4. bad personal health prevents the person drinking.

Table A3.2.4. Factor scores (rotated component matrix) of 15 reasons for drinking

Motive for Not Drinking items	Bad experiences	Indifference, rejection	Principle & frugalattitude	Bad personal health
I have no interest in drinking	-0.042	0.584	0.133	-0.110
I have seen bad examples of what alcohol could do	0.505	0.297	0.340	-0.056
Drinking is against my religion	0.109	-0.272	0.675	-0.052
I was brought up not to drink	-0.040	0.204	0.713	-0.006
Drinking is too expensive	0.107	0.298	0.661	0.079
Drinking is a waste of money	0.135	0.455	0.614	-0.015
Drinking is bad for your health	0.283	0.450	0.345	0.154
My health is bad, and I can't drink	0.109	-0.061	-0.013	0.908
I can't drink because I am taking medication	0.046	-0.036	0.029	0.916
I don't like the taste of alcohol	-0.058	0.721	0.077	-0.046

Motive for Not Drinking items	Bad experiences	Indifference, rejection	Principle & frugalattitude	Bad personal health
I don't like the effect of alcohol on me	0.339	0.632	0.056	0.018
I've been hurt by someone else's drinking	0.570	0.057	0.058	0.026
Drinking would have a bad effect on my activities	0.624	0.306	0.106	-0.027
I am afraid I would have problems with alcohol or be an alcoholic if I drank	0.733	-0.026	0.074	0.060
Previously my drinking already harmed my life	0.664	-0.139	-0.063	0.153

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Analyses of variance shows that the differences in means on summated scale scores are significant. Even though countries differ substantially in scoring pattern on reasons for not drinking, an analysis of abstention rate in each country and scores of summated scales of the four factors did not return any significant correlations.

Discussion and conclusion

The four factors on reasons for drinking are to a great extent in line with the four factor model of drinking motives, determined by two dimensions, explicated earlier. The 'pleasure' factor is in line with enhancement (positive, internal dimensions), the 'fitting in with others' to the social rewards factor (positive, external). The question about avoiding social rejection (in the original model pertaining to conformity: negative, external) also loads on the social factor. The reason for this is that only two questions inquire about these types of motives. The 'problems' factor combines with the coping factor, attenuation or avoidance of negative emotions (negative, internal). The healthiness factor is a new factor, since the pertaining questions were not part of the original model, but introduced deliberately.

Overall, hedonistic reasons are endorsed most often as important reasons for drinking, followed by social reasons. The reasons related to negative emotions are endorsed least. Contrary to expectations, health does not seem to be an important reason to drink.

There are clear country (read cultural) differences in the way participants endorse the items. Obviously, the Mediterranean countries have low endorsement rates overall, and they score high on the 'problems' factor. This may be indicative of a cultural 'bias', the role alcohol has in society. When alcohol has specific values in demarcating a time out period and special occasions, it is more likely to be endorsed as special reasons for drinking. In societies in which alcohol is part of ordinary routine, people have less personalised reasons for drinking. Asking for reasons for habitual use of alcoholic beverages may not be considered a personal matter. The Nordic and Baltic countries obviously endorse more personalised motives for drinking.The conceptual model that arises from the SEAS data from all age categories is more or less similar to the one found in adolescent samples reported earlier. Clear country differences emerge regarding motives for not drinking, but no association is found between the abstention rate in the SEAS countries and the endorsement scores on any of the four factor scales.

References:

Blane HT & Leonard KE (1999) Psychological theories of drinking and alcoholism. London: Guilford Press.

Cooper, ML (1994) Motivations for alcohol use among adolescents: Development and validation of a four-factor-model. Psychological Assessment, 6(2), 117–128.

Cox & Klinger (1988) A motivational model of alcohol use. J Abnormal Psychology, 97, 168–180.

Fossey, E (1993) Young children and alcohol: a theory of attitude development. Alcohol & Alcoholism, 28, 485–498.

Kuntsche E (2007) Tell me… Why do you drink, A study of drinking motives in adolescence. Dissertation. Maastricht University.

Leigh B (1990) Alcohol expectancies and reasons for drinking: Comments from a study of sexuality. Psychology of Addictive Behavior, 4, 91–96.

Merrill JE Scott Martin S AbarCC Jackson KA (2016) Trajectories and correlates of reasons for abstaining or limiting drinking during adolescence. Addictive Behaviors, 52, 1–7

Rohsenow, D J (1983) Drinking habits and expectancies about alcohol's effects for self versus others. Journal of Consulting and Clinical Psychology, 51, 752–756.

Stritzke WGK, Butt, JCM (2001) Motives for not drinking alcohol among Australian adolescents: Development and initial validation of a five-factor scale. Addictive Behaviors, 26, 633–649.

Wiers RW, Hoogeveen KJ, Sergeant JA, Gunning WB (1997) High and low dose alcohol related expectancies and the differential associations with drinking in male and female adolescents and young adults. Addiction, 92, 871–888.

Wood, MD, Nagoshi, CT, & Dennis, DA (1992) Alcohol use norms and expectations as predictors of alcohol use and problems in a college student sample. American Journal of Drug and Alcohol Abuse, 18, 461–476.

A3.3 Alcohol consumption

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Introduction

In this chapter the data on alcohol consumption will be presented and drinking patterns will be analysed. Two consumption estimates, based on beverage-specific quantity-frequency approach (BSQF) and risky single occasion drinking (RSOD) will be considered to investigate usual drinking patterns and risky drinking, respectively. Both approaches, i.e. BSQF and RSOD, will be used to estimate annual alcohol consumption (for methodological details see appendix). However, this estimate of annual consumption does not serve the purpose of calculating precise, comparable consumption levels. As confirmed by half a century of research experience, alcohol surveys cannot cover all alcohol consumption, which is recorded by sales statistics. In fact, the opposite is true, as the so called coverage rate in the vast majority of surveys may range between 30 and 60 per cent of sales statistics. Instead, the drinking survey approach offers information which may not be extracted from routine statistics. First of all, it gives data regarding what proportion of the population consumes alcohol, and how this consumption is distributed across various demographic groups such as gender and age. The survey also offers data on frequency of drinking, volume of drinking per occasion, and prevalence of risky drinking, all crucial for formulating, implementing and monitoring alcohol policy (Alanko 1984, Mäkelä 2006).

Therefore, this chapter will analyse first: a prevalence of drinking beer, wine and spirits in terms of percentage of their consumers during the past 12 months. Frequency of drinking these alcoholic beverages will be shown in two ways: in terms of daily, weekly, monthly, and less frequent consumption in the population and in terms of an annual number of drinking days per drinker. Analyses of quantity consumed on usual drinking day will follow. Risky Single Occasion Drinking (RSOD) will be the subject of subsequent analyses and estimates. Finally, a share of RSOD days in total number of drinking days as well as the share of RSOD consumption in total annual alcohol consumption will be estimated. Last but not least, the prevalence of subjective drunkenness will be presented and discussed.

Beverage Specific Quantity Frequency (BSQF)

There are three major approaches to measuring alcohol consumption in surveys:

- quantity-frequency measures;
- graduated frequency measures;
- short-term recall measures.

All three approaches were tested in the SMART Project: beverage specific quantity-frequency method (BSQF), generic quantity-frequency method (QF), graduated frequency method (GF) and last occasion method (LO). The SMART study recommends the BSQF approach as it gave the highest estimates of annual consumption, offered reliable predictions of drinking problems and was considered relatively easy to implement by the majority of respondents (Sierosławski 2011).

The literature review undertaken within the SMART study confirmed that the beverage specific quantity-frequency (BSQF) approach works well in international comparative surveys. (Bloomfield, Hope, Kraus 2013). Moreover, it is the approach which is most commonly used to measure alcohol consumption across Europe according to the review of 27 European countries completed as part of the SMART study. (Sierosławski, Foster, Moskalewicz 2013) as well as in the current review discussed in Part B of this report.

The BSQF method consists of questions about frequency of drinking particular types of alcoholic beverages in a defined period and about the quantities of these beverages usually drunk on one occasion (drinking episode) or one day.

The advantages of this method as a European standard are as follows:

1. The survey questions are understandable even for respondents with limited intellectual skills.
2. The wording of the questions is in line with respondents' everyday experiences and consistent with the way respondents think.
3. Drinking behaviours are reported in a simple way which does not demand from respondents any complicated calculations or other operations.
4. Only six questions are used, so the implementation is not time-consuming.
5. The method captures the essential variations in drinking cultures including beverage preferences.

The BSQF also has its limitations. One of the shortcomings of BSQF is that it cannot capture the variations of different types of alcoholic beverages drunk together on one occasion, and it cannot estimate the overall frequency of drinking as it asks about each beverage separately. Also, the average quantity of alcohol consumed per occasion or on one day cannot be estimated because we do not know how often a respondent consumes a combination of various types of alcoholic beverages on one occasion.

Another approach, called the generic quantity/frequency method, can provide generic frequency of drinking and average quantity of alcohol consumed per occasion or day, but it has two serious deficiencies. First of all, it does not capture the variation of different drinking cultures associated with different beverages, which may vary across countries. Secondly, it forces respondents to re-calculate their varying drinking practices into a common quantity measure – a standard drink – something that is usually difficult for respondents, especially those who drink various alcoholic beverages and are not familiar with the concept of the standard drink. Moreover, in the generic approach, respondents may report only the beverage which is the most typical for their regular drinking pattern and do not consider beverages consumed irregularly.

The 'standard drink', which originated in the United States (Bloomfield K., Hope A., Kraus L. 2013) takes into account the variety of alcoholic drinks with very different alcohol content, commonly consumed in glasses of different volumes and is used as a means of providing information to consumers to help them measure their own alcohol consumption. Nevertheless, as volume of alcohol in a drink differs from country to country and is still new or unknown in a number of drinking cultures, its application as a comparable measure is not feasible in European comparative studies.

While in epidemiological studies the levels of consumption are usually expressed in grams of pure alcohol, in drinking guidelines communicated to the public, grams are often translated into "standard drinks" (SDs) or "units", presumed to be more practicable for quantifying alcohol consumption. According to the RARHA WP5 results (Montonen 2016) the content of grams of pure alcohol varies among EU countries, with a mode value of 10 grams and a convergence towards an average of 11 grams.

There are different time frames applied for asking about alcohol consumption, the most common being 12 months, though 30 days and 7 days are also used. There are difficulties with all time frames. It is likely that many respondents find it difficult to recall their drinking over a 12 month period. However, the 30 or 7 days approach fails to capture irregular seasonal drinking patterns and obviously those who have not drunk in the last month or week (Dawson 2003). It is important to note that 'last 30 days' is not necessarily representative of the whole year due to seasonal variation – as reported in the focus group discussions carried out within the SMART study (Tickett et al. 2013).

The majority of surveys ask participants to estimate their alcohol consumption by reference to one day, though some use 'an occasion.' There are difficulties in using 'an occasion' as it is very imprecise in terms of duration (i.e. how long is an occasion?); and how representative is an 'occasion' of typical drinking? 'One day' is more easily understood and defined and therefore this was adopted as a standard time frame when asking about volume of alcohol consumed.

Consumers of alcoholic beverages and frequency of drinking

The proportion of respondents who have drunk alcoholic beverages such as beer, wine and spirits in the previous 12 months is statistically higher among men than women in the participating countries excluding Austria, Finland, Denmark, Iceland, Norway, Sweden and UK (table A3.3.1). The analysis by age groups show that in Croatia, Greece, Poland , Portugal and in Spain-Catalonia[1] the highest percentages are recorded among young people, and that the values decrease by age and are lowest among people aged 50–64 years. The highest values of alcoholic beverages drinkers are registered for both genders in Austria, Denmark and Greece and the lowest ones in Italy, Portugal, Hungary, Croatia, Romania and Spain-Catalonia. The prevalences are above 90% also in Bulgaria, Greece and Poland among men and in Iceland Norway, and Sweden among women.

Table A3.3.1. Proportion (%) of drinkers by gender and age groups

	Total (%)	Male (%)	Female (%)	Gender ratio	18–34 yrs (%)	35–49 yrs (%)	50+ yrs (%)
Austria	91.6	92.9	90.3	1.03	91.6	92.6	90.5
Bulgaria	91.2	93.9	88.6	1.06	90.8	91.4	91.5
Croatia	78.1	85.3	71.0	1.20*	85.0	76.7	72.2**
Denmark	92.5	93.3	91.8	1.02	90.2	93.8	93.1
Estonia	88.7	90.5	87.0	1.04*	88.9	90.4	86.9
Finland	89.7	90.7	88.6	1.02	91.8	89.8	87.3
France	84.8	89.1	81.0	1.10*	79.9	84.7	89.3**
Greece	92.0	95.1	89.0	1.07*	96.6	92.2	87.1**
Hungary	75.9	83.8	68.1	1.23*	79.5	75.2	73.0
Iceland	88.8	87.1	90.5	0.96	91.0	89.1	85.9
Italy	69.8	78.1	61.6	1.27*	72.7	69.8	67.3
Lithuania	89.2	92.2	86.3	1.07*	89.7	91.7	86.1
Norway	90.2	90.9	89.4	1.02	90.3	89.3	90.7
Poland	86.4	92.1	80.7	1.14*	89.7	87.0	81.8**
Portugal	72.1	84.2	60.7	1.39*	75.7	75.7	64.0**
Romania	76.6	85.2	68.0	1.25*	80.4	76.9	71.9
Spain* **	81.8	87.5	76.0	1.15	82.2	83.1	79.4
Spain-Catalonia	77.6	82.9	72.3	1.15	83.0	80.1	67.9**

[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

	Total (%)	Male (%)	Female (%)	Gender ratio	18–34 yrs (%)	35–49 yrs (%)	50+ yrs (%)
Sweden	89.2	89.3	89.1	1.00	87.5	89.5	90.7
UK	85.0	86.3	83.8	1.03	90.1	83.3	81.4
AVERAGE	**84.6**	**88.5**	**80.7**	**1.10***	**86.3**	**85.1**	**81.9****

* Fisher exact test (P<0.001)

** Linear-by-Linear Association test (P<0.001)

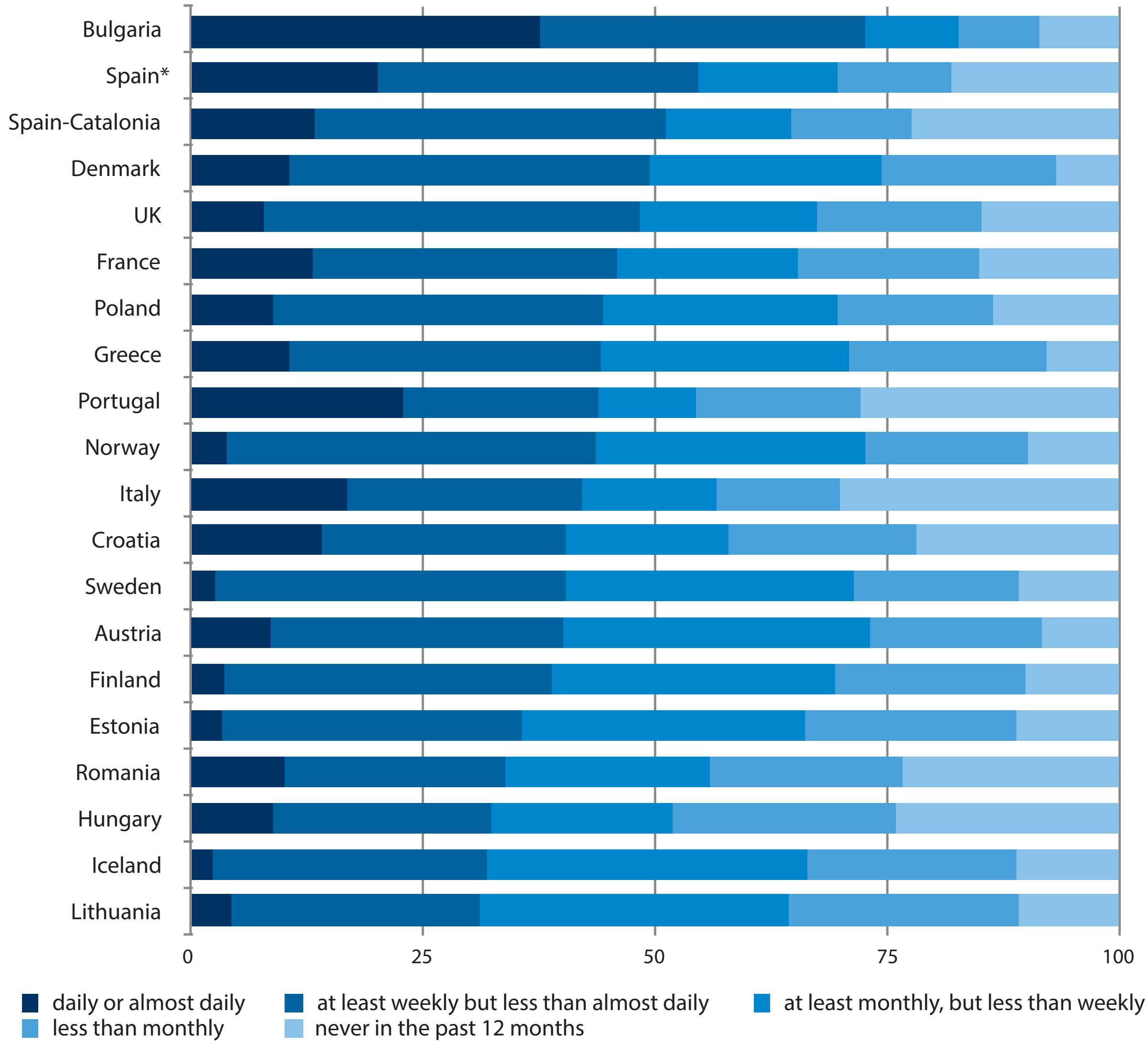
*** Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The prevalence of alcohol drinkers was adopted as an indicator of annual alcohol consumption and the percentages of respondents consuming alcohol daily or almost daily or at least once a week were considered as indicators of frequency of drinking (figure A3.3.1). The denominator for the prevalence measure is all the subjects who have participated to the survey while the denominator for percentages is all respondents.

The highest proportions of respondents drinking daily or almost daily are observed in Bulgaria (37.5%), followed by Portugal (22.8%), Spain (20.1%), Italy (16.7%) and Croatia (14.1%). The countries with the lowest results are located in the following northern countries: Iceland (2.2%), Estonia (3.3%), Sweden (2.5%), Finland (3.5%) and Norway (3.9%).

The analysis of at least weekly consumers shows percentages higher than the 3rd quartile in Denmark (49.3%), UK (48.4%) Spain (54.4%), including Spain Catalonia (51.1%) and Bulgaria with the highest proportion (72.5%); on the contrary, the lowest values (below 1st quartile) are observed in Iceland (31.8%), Hungary (32.4%), Estonia (35.7%), Romania (33.7%) and Lithuania (31.1%).

Figure A3.3.1. Drinkers and their frequency of drinking any alcoholic beverage in the past 12 months



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Consumers of beer, wine and spirits and frequency of drinking

The prevalence of wine consumers is higher than the prevalence of any other beverages in 11 out of 19 investigated countries while the prevalence of beer is higher than any other beverages in 8 out of 20 countries; only in Lithuania the prevalence of spirits consumers (80.6%) is higher than the prevalence of wine (74.2%) and only slightly higher than the prevalence of beer consumers (76.9%).

The percentage of beer consumers exceeds 50% in each country. The highest percentage is observed in Bulgaria (85.9%), followed by Denmark (81.3%) and Iceland (78.8%). Additionally the proportion of beer consumers was above 76% (3rd quartile) in Lithuania (76.9%), Austria (76.0%), Greece (76.1%), and Norway (75.3%). The lowest percentages of beer consumers are noted in Portugal (54.5%), Italy (56.4%) and France (57.6%).

The prevalence of wine consumption exceeded 50% in 18 out of 19 investigated countries. The highest percentages (above 3rd quartile) are observed in Denmark (82.9%), Austria (81.5%), Greece

(80.2%), Iceland (79.7%) and Sweden (79.0%) while the lowest values (under the 1st quartile) are observed in Poland (36.7%), Hungary (49.3%), Italy (55.8%), Romania (57.5%) and Spain (56.1%).

The prevalence of spirits consumption exceeded 50% in 14 out of 19 investigated countries. The highest percentages (above 3rd quartile) are observed in Bulgaria (76.9%), Denmark (78.1%), Iceland (68.4%), Lithuania (80.6%) and Sweden (70.2%) while the lowest values (under the 1st quartile) are reported in Croatia (45.4%), Hungary (46.6%), Italy (26.0%), Romania (40.9%) and Portugal (32.8%).

Table A3.3.2. Proportion(%) of drinkers by different beverages

	Beer		Wine		Spirits	
	(%)	Gender ratio	(%)	Gender ratio	(%)	Gender ratio
Austria	76.0	1.3*	81.5	1.0	65.9	1.1*
Bulgaria	85.9	1.1*	70.1	1.0	76.9	1.1*
Croatia	66.2	1.5*	58.2	1.3*	45.4	1.5*
Denmark	81.3	1.2*	82.9	1.0	78.1	1.1
Estonia	58.4	1.9*	70.1	0.8*	61.1	1.7*
Finland	68.5	1.6*	73.3	0.9	66.6	1.4*
France	57.6	1.8*	72.5	1.1*	49.8	1.9*
Greece	76.1	1.3*	80.2	1.1*	52.7	1.5*
Hungary	61.7	1.6*	49.3	1.1	46.6	1.6*
Iceland	78.8	1.2*	79.7	0.9	68.4	1.1
Italy	56.4	1.5*	55.8	1.3*	26.0	1.8*
Lithuania	76.9	1.3*	74.2	0.9	80.6	1.2*
Norway	75.3	1.3*	76.9	0.9*	65.6	1.4*
Poland	74.2	1.5*	36.7	0.6*	61.4	1.5*
Portugal	54.4	1.8*	57.6	1.5*	32.8	2.1*
Romania	67.1	1.4*	57.5	1.4*	40.9	2.1*
Spain**	68.5	1.3*	56.1	1.2*	56.4	1.4*
Spain-Catalonia	67.0	1.3*	58.4	1.3*	52.0	1.4*
Sweden	69.4	1.5*	79.0	0.9	70.2	1.3*
UK	59.5	1.9*	69.1	0.9	60.6	1.2*
Average	**69.0**	**1.4**	**67.0**	**1.0**	**57.9**	**1.4***

* Fisher exact test (P<0.001)

** Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The analysis of the three investigated beverages show that the prevalence is higher than the 3rd quartile for each beverage in Iceland and Denmark, and that values are also higher for beer and spirits in Lithuania and Bulgaria, for beer and wine in Greece and for wine and spirits in Sweden. On the contrary, Italy has prevalences lower than the 1st quartile for each beverage, Hungary and Romania only for wine and spirits and Portugal for both beer and spirits.

In each survey (table A3.3.2) the prevalence of beer consumers is higher among men than women. The prevalence of wine consumers is higher among men than women in Croatia, France, Greece, Italy, Portugal, Romania, Spain, including Spain Catalonia; on the contrary, the prevalence of wine consumers is higher among women than men in Estonia, Norway and Poland. In all surveys, excluding Denmark and Iceland, the prevalence of spirits consumers is higher among men than women. There were no gender differences between wine consumers in Austria, Bulgaria, Finland, Denmark, Hungary, Iceland, Lithuania, Sweden and UK.

The analysis by age group (table A3.3.3) shows that on average the prevalence of beer and spirits drinkers is high among the youngest age group, decreases among middle-aged, and reaches the lowest levels among the older age group, while there is no statistical increase or decrease of the prevalence of wine consumers according to the different age groups. The analysis at country level highlights that the prevalence of beer consumers decreases by age groups in Croatia, Estonia, Greece, Hungary, Poland, Portugal and increases in Sweden. Likewise the prevalence of wine consumers increases by age groups in France, Denmark, Hungary, Norway and Spain and finally the prevalence of spirits consumers decreases in Austria, Croatia, Finland, France, Greece,Iceland, Italy, Portugal UK and Spain (also in Catalonia).

Table A3.3.3. Drinkers by age groups and type of beverages

	Beer (%)			Wine (%)			Spirits (%)		
	18–34 yrs	35–49 yrs	50–65 yrs	18–34 yrs	35–49 yrs	50–65 yrs	18–34 yrs	35–49 yrs	50+ yrs
Austria	77.3	75.0	75.6	80.4	82.3	82.0	73.6	64.3	59.2#
Bulgaria	83.3	86.8	87.8	66.2	72.5	71.6	73.8	78.1	79.2
Croatia	72.7	66.5	59.2#	60.9	58.5	55.2	55.1	42.9	37.8#
Denmark	76.5	82.8	83.3	72.4	85.7	88.0#	80.2	79.1	75.8
Estonia	63.7	60.8	49.9#	70.5	72.9	66.8	64.8	58.5	59.3
Finland	70.0	68.3	67.1	77.1	73.2	69.3	74.0	61.1	63.9#
France	62.7	55.8	54.9	59.8	74.6	81.7#	59.8	48.8	42.0#
Greece	83.0	76.9	68.0#	83.0	80.2	77.3	75.2	48.6	35.1#
Hungary	65.8	62.3	56.7#	43.6	50.1	54.2#	50.2	43.5	46.2
Iceland	77.7	82.7	76.0	77.6	82.3	79.5	78.6	64.3	59.2#
Italy	58.9	58.4	51.9	51.8	55.5	59.6	37.6	22.1	19.9#
Lithuania	80.1	80.3	70.5	74.1	78.8	69.5	76.7	84.2	80.9
Norway	77.1	73.4	75.2	72.3	78.4	81.1#	71.8	61.0	63.0
Poland	82.9	74.5	63.8#	37.8	37.2	34.9	59.1	65.0	60.6

	Beer (%)			Wine (%)			Spirits (%)		
	18–34 yrs	35–49 yrs	50–65 yrs	18–34 yrs	35–49 yrs	50–65 yrs	18–34 yrs	35–49 yrs	50+ yrs
Portugal	61.9	56.1	44.5#	50.0	62.8	60.0	43.1	29.4	25.5#
Romania	70.6	69.3	60.6	58.3	57.6	56.5	38.7	42.8	41.6
Spain*	67.8	71.1	65.5	48.4	57.5	63.2#	67.4	56.2	43.6#
Spain-Catalonia	67.5	71.8	59.2	46.5	66.1	59.8	63.0	52.0	40.2#
Sweden	62.7	70.2	76.5#	76.8	79.5	81.0	71.1	69.2	70.3
UK	63.5	57.9	57.2	66.6	71.4	69.6	69.8	58.2	53.8#
Average	**71.3**	**70.0**	**65.2#**	**63.7**	**68.9**	**68.0**	**64.2**	**56.5**	**52.9#**

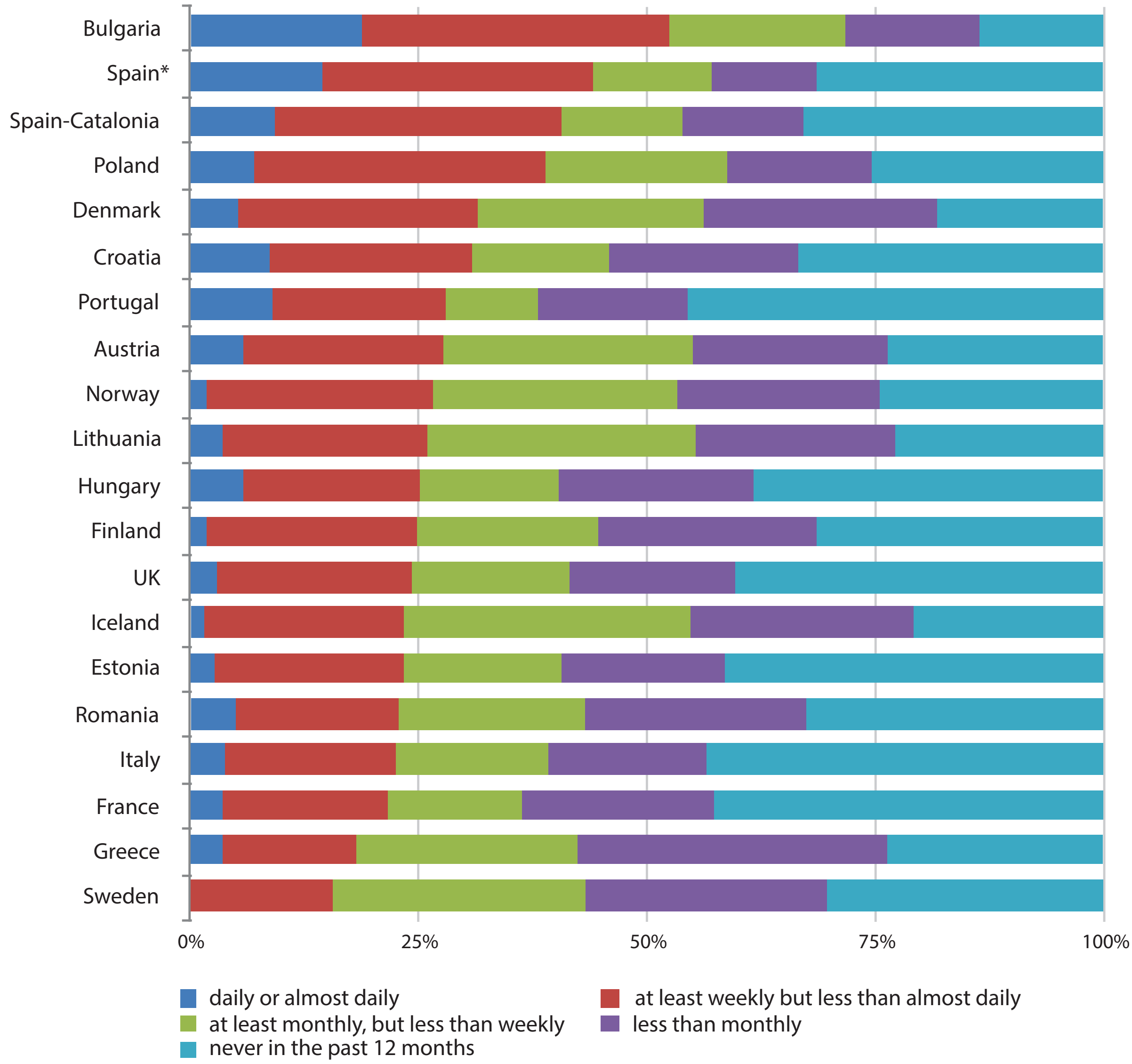
Linear-by-Linear Association test (P<0.001)

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The percentages of respondents drinking particular alcoholic beverages daily or almost daily, and the percentage of almost weekly drinkers, varies from country to country.

The percentages of almost daily beer drinkers shown on figure A3.3.2 vary from 0.2% in Sweden to 18.9% in Bulgaria like the percentages of weekly drinkers (15.6% and 52.4% respectively). The analysis of daily drinkers highlights that in Croatia, Portugal, Spain, including Spain-Catalonia the percentages are higher than in the other countries while in Finland, Iceland, Norway and Estonia the values are under 3% (1st quartile). The percentage of weekly beer consumers is above 30% (3rd quartile) in Bulgaria and Spain (as highlighted for daily consumers) and in Denmark, and Poland, on the other hand we observe a low value of weekly beer consumers in France, Greece, Italy and Romania.

Figure A3.3.2. Population by frequency of drinking beer in the past 12 months



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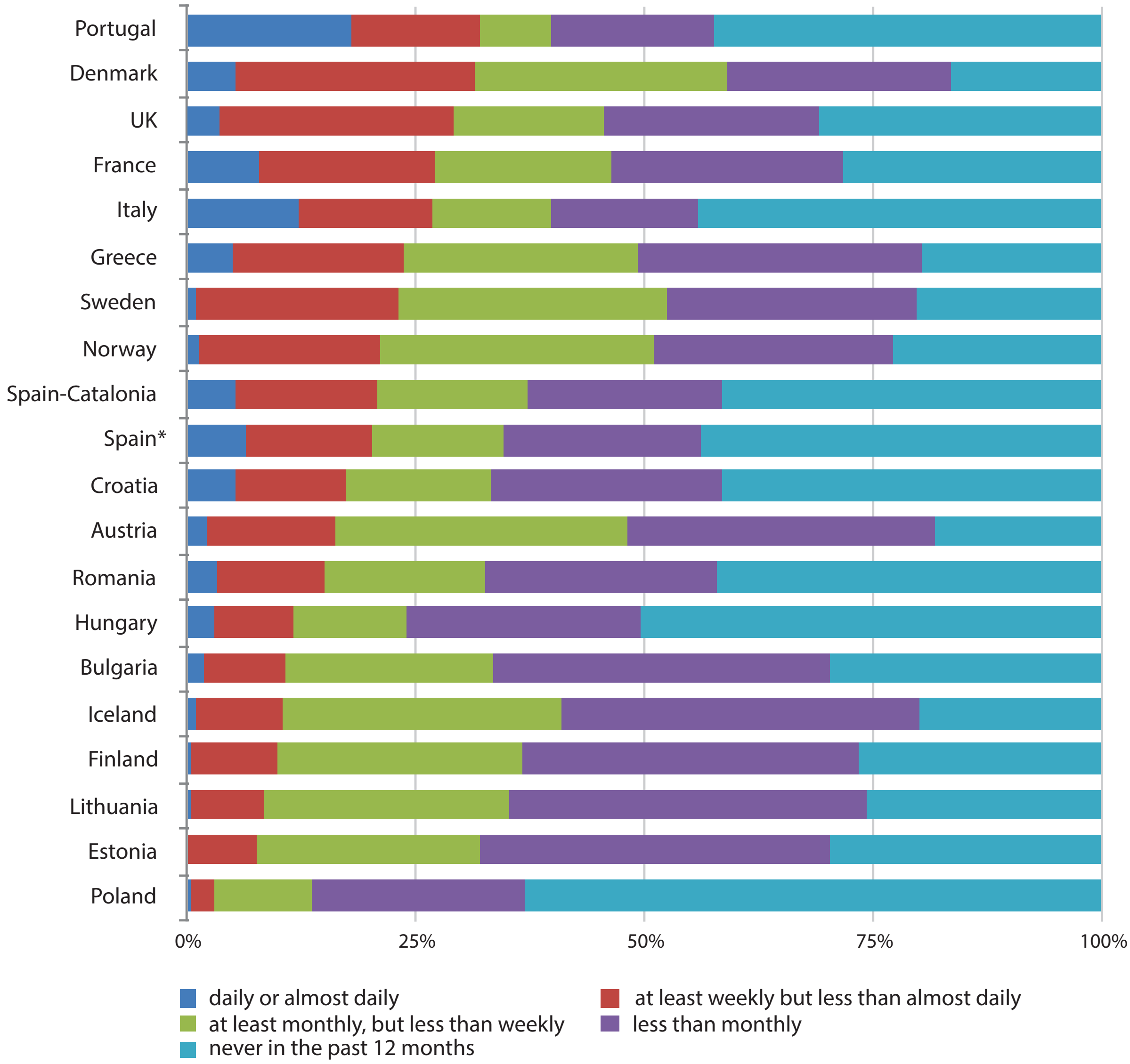
The proportions of daily and at least weekly wine drinkers (figure A3.3.3) are the highest in Portugal (18.0% and 31.9% respectively). The analyses show high values (above 3rd quartile) of daily and weekly wine drinkers also in Italy (12.2% and 26.9% respectively) and in France (8.1% and 28% respectively). High values of daily drinkers are also observed in Spain and Denmark and high values of weekly drinkers are observed in UK and Sweden. At the other end of the ranking, low values of daily and weekly wine drinkers are observed in Estonia, Finland, Iceland, Lithuania.

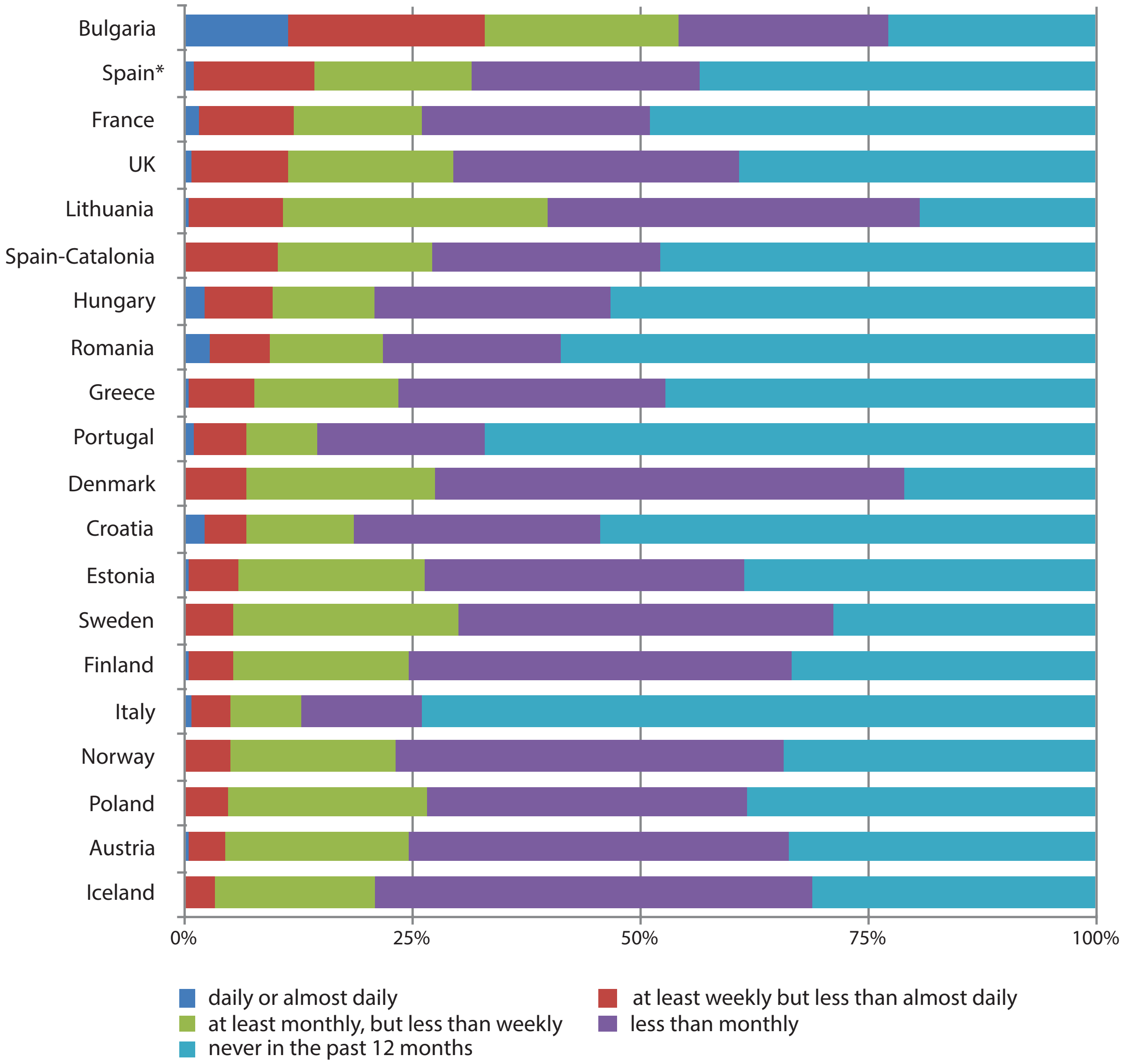
Figure A3.3.3. Population by frequency of drinking wine in the past 12 months



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The proportion of spirits' drinkers (figure A3.3.4) varies from 3.4% among those who drink weekly and 0.2% among those who drink daily or almost daily in Iceland to 11.3% and 32.9% among those who drink weekly and almost daily in Bulgaria. The percentages of daily drinkers are also high in Croatia, France, Hungary and Romania and the values are also higher than 10% (3rd quartile) in France, Lithuania, Spain and UK. The lowest rates of weekly spirits' drinkers are noted in Austria, Italy, Norway and Poland.

Figure A3.3.4. Population by frequency of drinking spirits in the past 12 months



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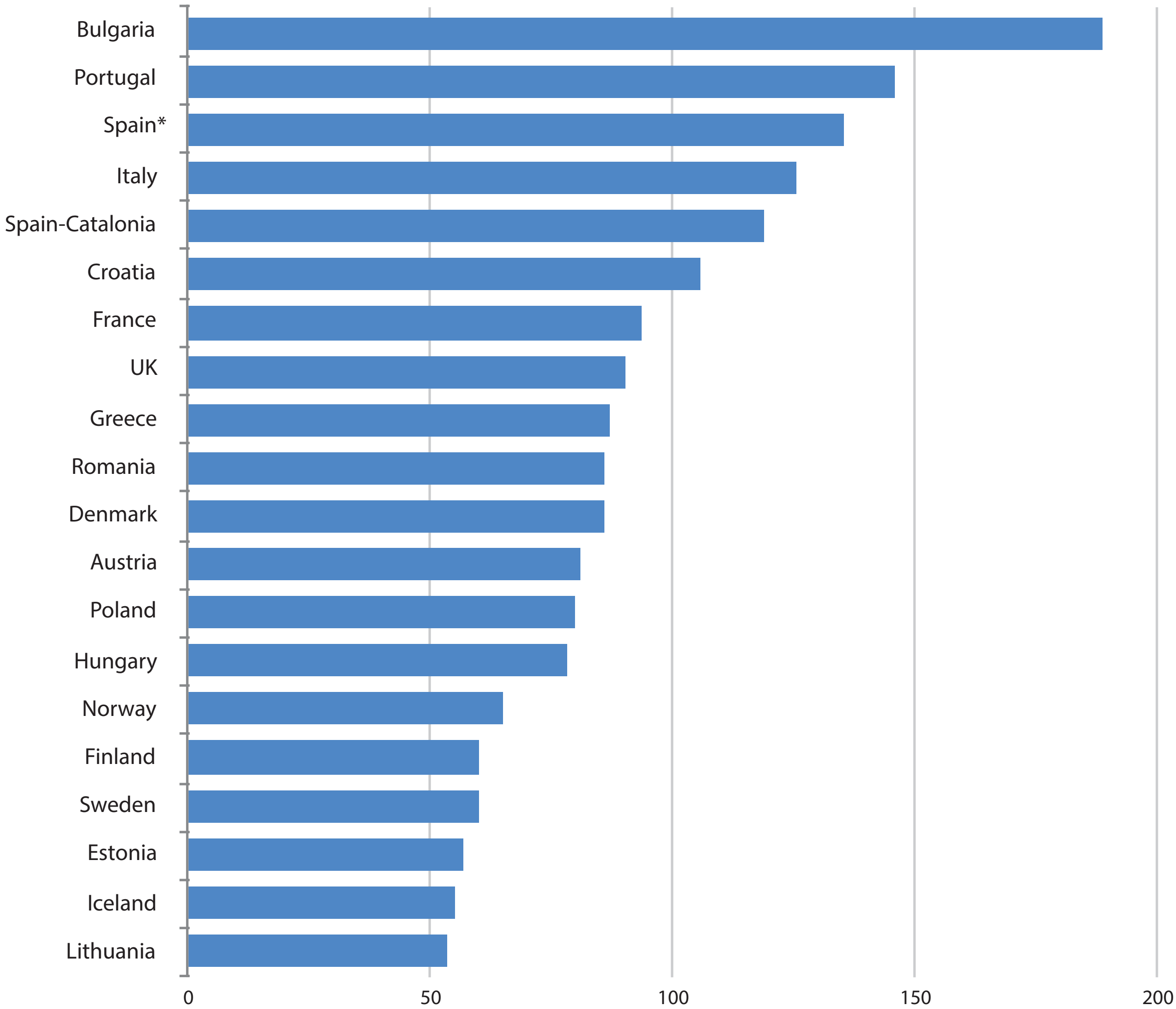
Frequency of drinking: annual number of drinking days

The data in the following paragraphs differ from those in previous paragraphs. They do not show population frequency; rather they indicate how often those who are current drinkers drink in general, and then how often they drink beer, wine and spirits. Moreover, frequencies of drinking are expressed in terms of mean annual number of days. As shown in figure A3.3.5 there is great variation across countries, including in the frequency of drinking among those who drink. The largest number (Bulgaria – 189 drinking days) is more than three and a half times higher than the lowest one (Lithuania – 53 drinking days). Generally lower frequency is observed in countries with a traditional drinking pattern based on spirits – Lithuania, Iceland, Poland, Estonia, Sweden, Finland, Norway. A higher frequency is seen in countries with a traditional drinking pattern based on wine – Bulgaria, Portugal, Spain, Italy, Croatia, France.

Figure A3.3.5. Annual frequency of drinking any alcoholic beverages (mean of number drinking days for all alcohol consumers)



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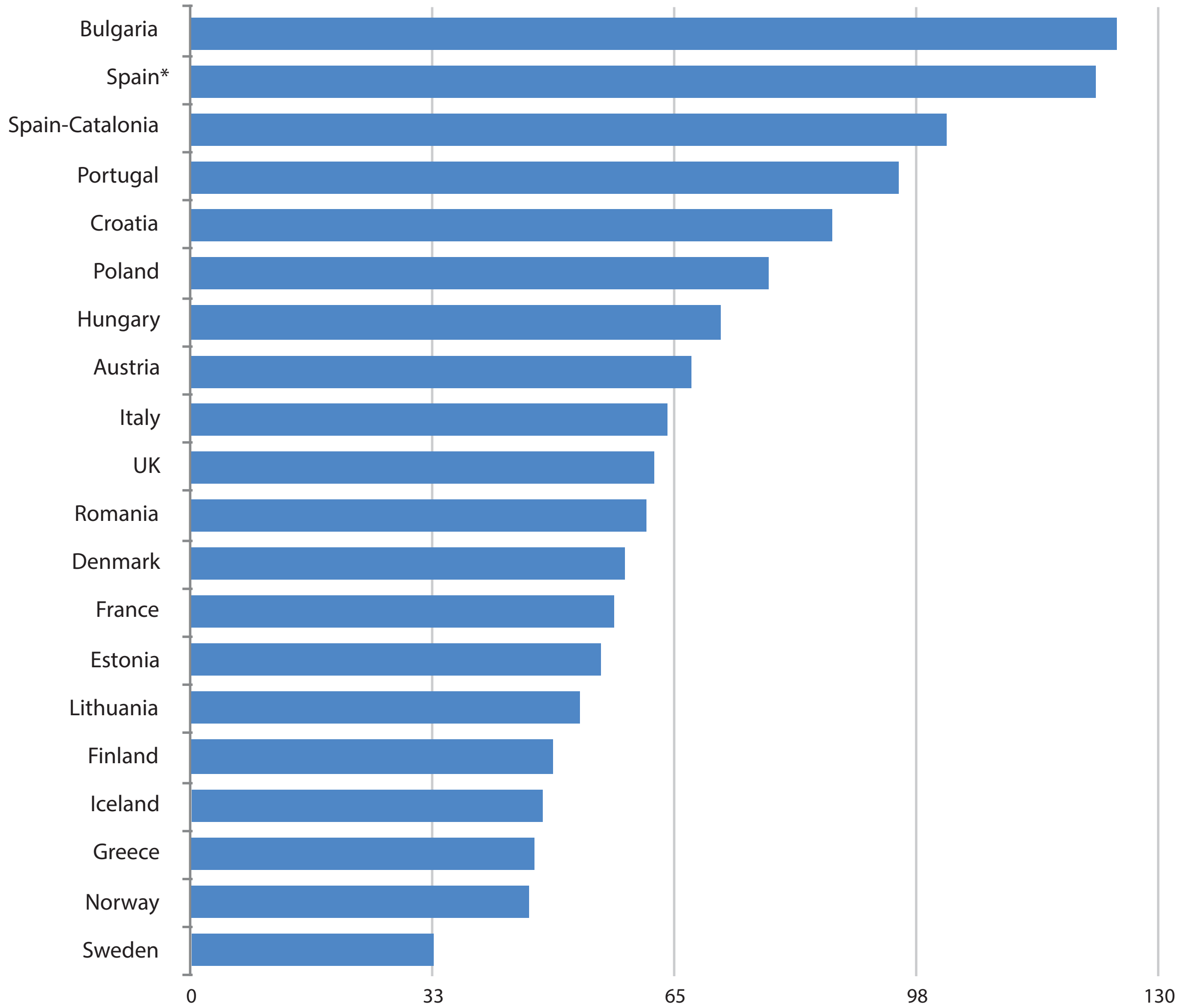
The mean frequency of drinking particular alcoholic beverages, calculated for respondents who drink these beverages, provides a different picture than data on the proportion of consumers of particular alcoholic beverages.

As shown on figure A3.3.6 the highest mean number of days with beer drinking among people who drink beer is noted in Bulgaria, Spain, Portugal and Croatia. It has to be stressed that this does not mean that beer is the most frequently drunk alcoholic beverage in all these countries. The opposite may be true, as in Portugal, where beer is the least prevalent beverage but those who drink beer do it very frequently. The lowest frequencies are observed in Lithuania, Iceland, Estonia, Sweden and Finland. The majority of countries with a high percentage of beer drinkers have a low mean frequency of beer drinking and vice versa.

Figure A3.3.6. Annual frequency of beer drinking (mean of number beer drinking days for beer consumers)



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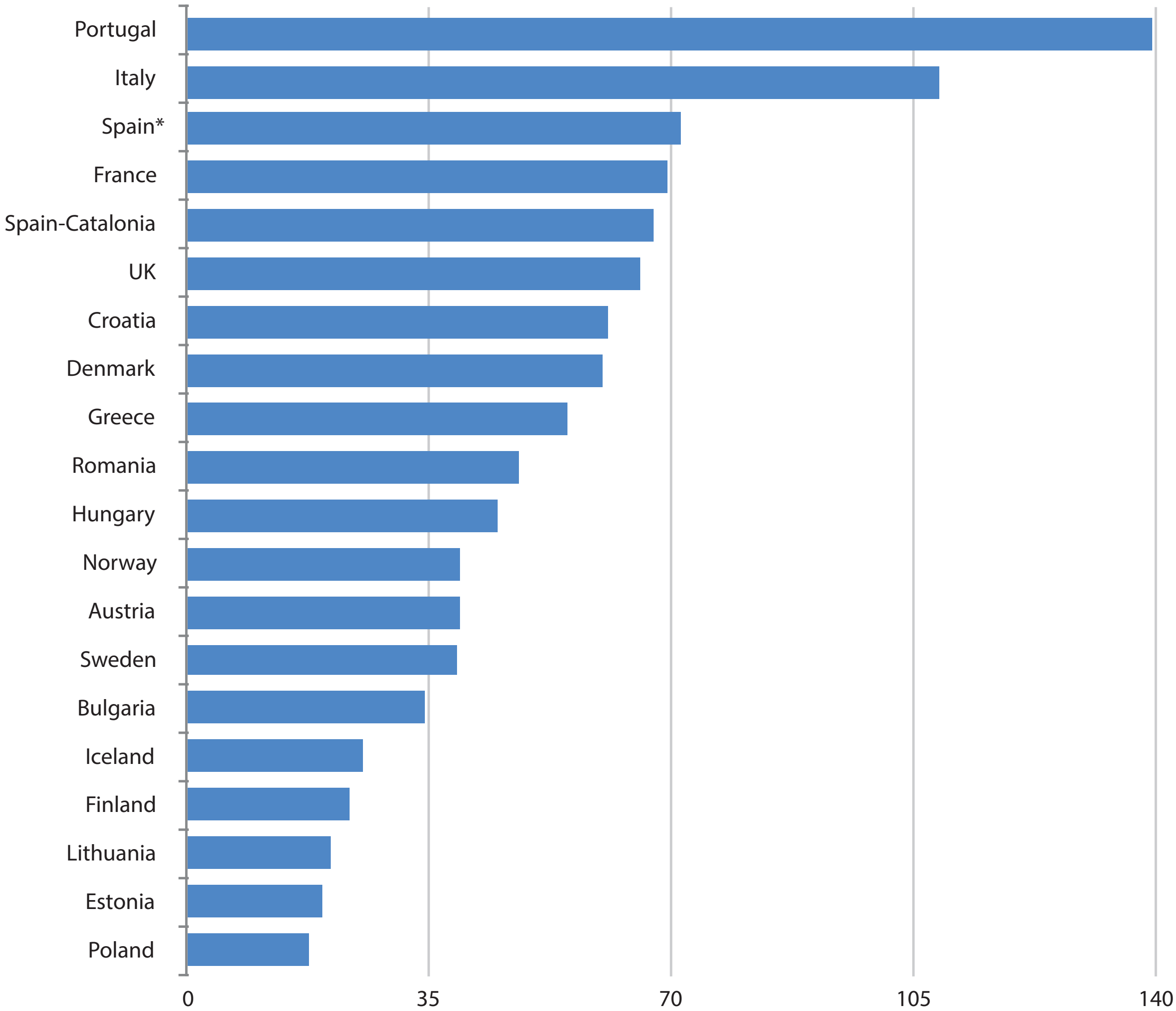
The highest annual frequency of wine drinking among wine consumers is noted in Portugal, Italy, Spain, France and Spain-Catalonia (figure A3.3.7). This is consistent with a traditional wine drinking pattern. The lowest number of wine drinking days among wine drinkers is noted in Poland, Estonia, Lithuania, Finland and Iceland – countries traditionally seen as spirits drinking cultures.

The ranking of countries according to the frequency of wine drinking among wine consumers is different than ranking according to the proportion of wine drinkers (compare with figure A3.3.2) . It seems that the mean number of wine drinking days more accurately identifies the countries that have long traditions in wine drinking such as Portugal, Italy, Spain or France.

Figure A3.3.7. Annual frequency of wine drinking (mean of number wine drinking days for wine consumers)

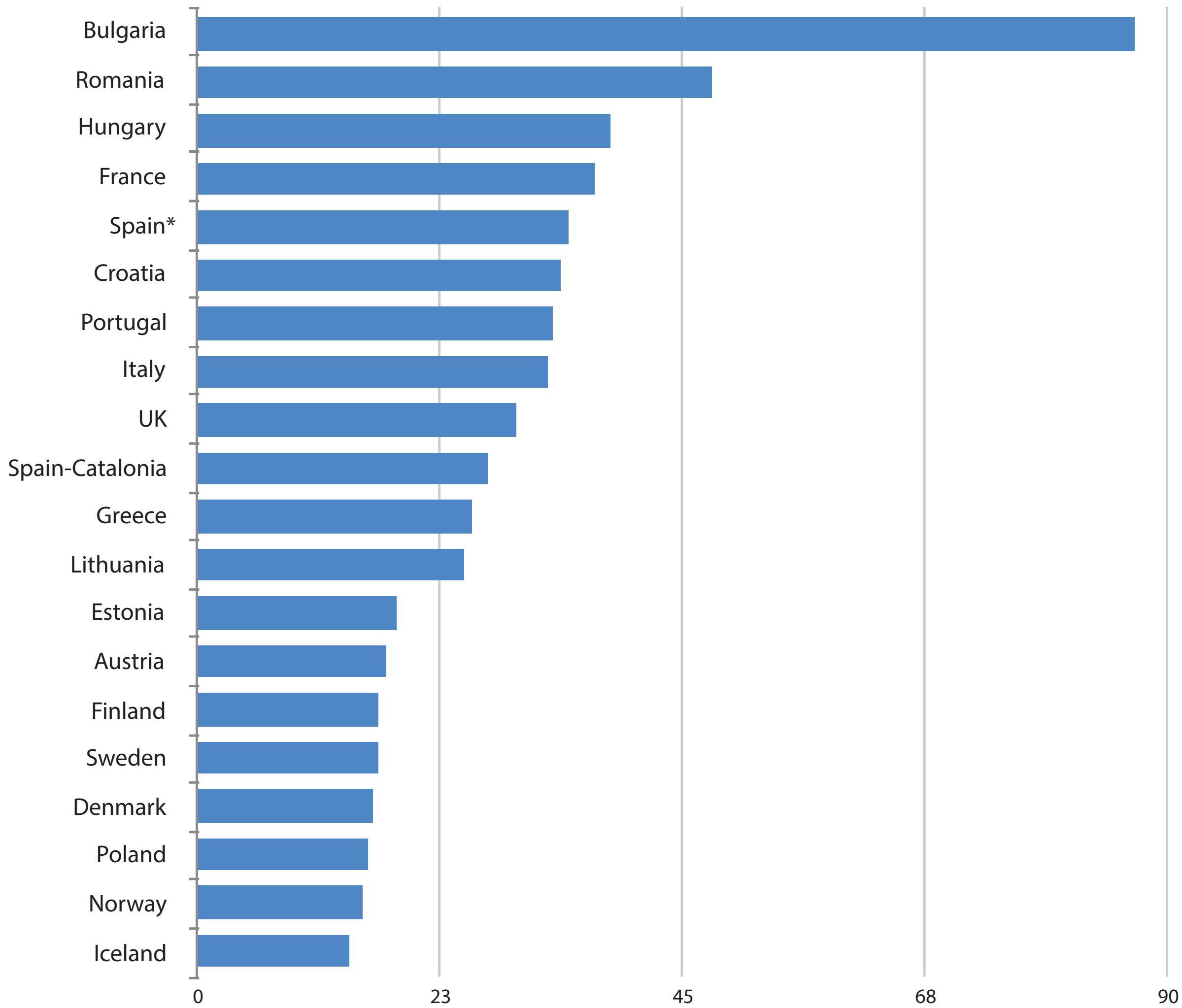


* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Annual frequency of drinking spirits in terms of mean drinking days (figure A3.3.8) is less differentiated by country than frequency of drinking beer and wine, and it is generally lower than the frequencies of drinking other alcoholic beverages. The only exception is Bulgaria where the mean annual number of spirits drinking days is extremely high (87 days). The frequency of spirits drinking in the next country in the ranking is only a good half of this (Romania 48 drinking days).

The frequency of spirits drinking is rather low in countries from Northern Europe, considered traditionally as spirits drinking countries even though spirits are not their beverage of choice any longer, like Iceland, Norway, Poland, Denmark, Sweden, Finland, and Estonia (lower than 20 drinking days per year) compared to countries like Bulgaria, Romania, Hungary, France Spain, and Croatia.

Figure A3.3.8. Annual frequency of spirits drinking (mean of number spirits drinking days for spirits consumers)



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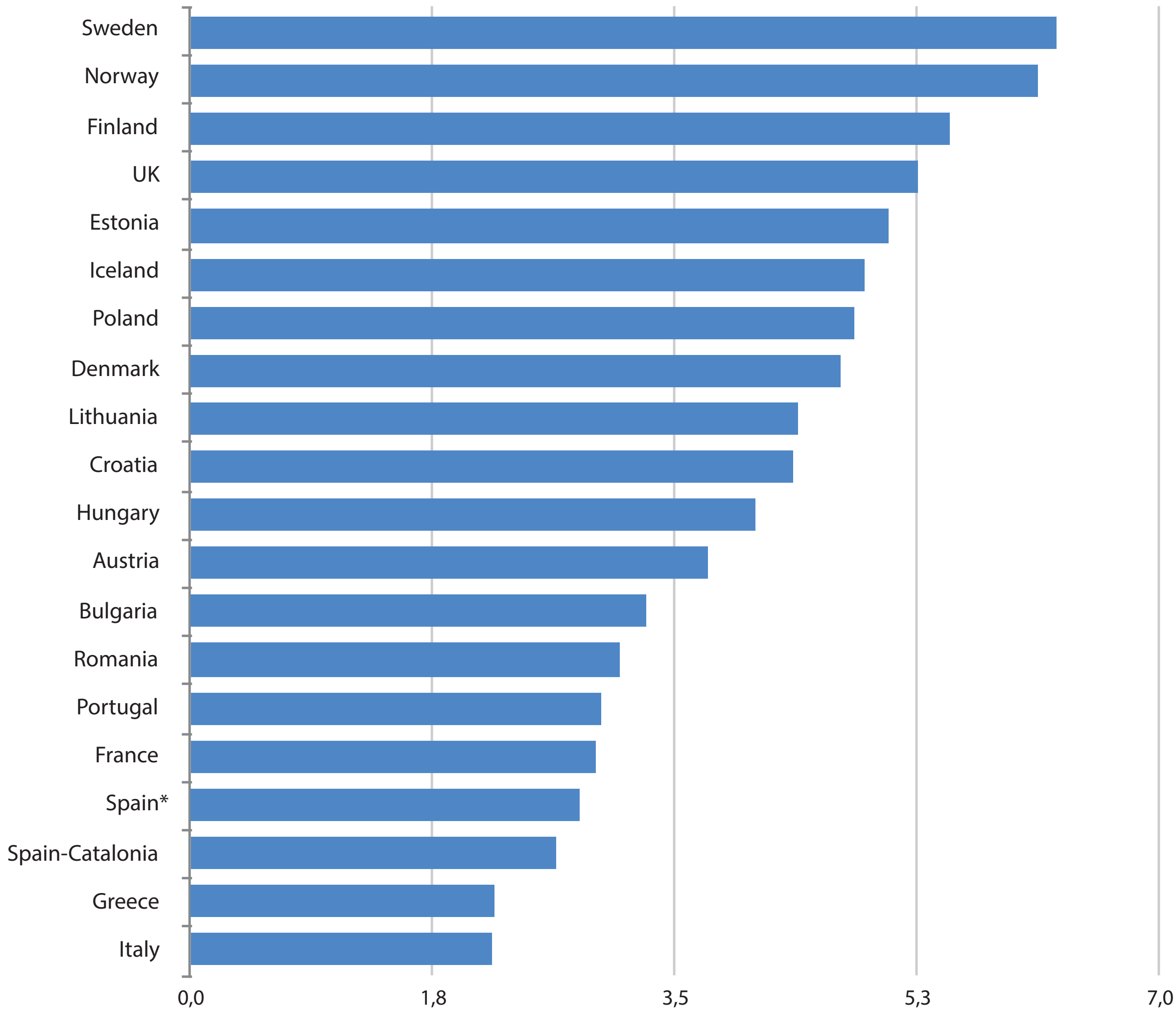
Quantity of beer, wine and spirits per drinking day

The quantities presented in the results section hereunder reflect, for the consumers of each country, the average amount of pure alcohol (in centilitres) usually ingested on a day when beer, wine or spirits are consumed.

The mean quantity of beer drunk in a usual beer drinking day recalculated into 100% alcohol varies from 6.3 cl in Sweden to 2.2 cl in Italy and Greece; within this wide range, the countries are more or less regularly distributed (figure A3.3.9). Among the five top countries, in addition to Sweden, are Norway (6.1 cl), Finland (5.5 cl), UK (5.3 cl) and Estonia (5.0 cl). In addition to Italy and Greece the countries with the lowest intake per drinking day are Spain, France and Portugal.

The general picture that emerges from Figure A3.3.9 points to a North-South European divide that could be placed approximately at a threshold of 4.2 cl of pure alcohol from beer consumed per drinking day. It is worth mentioning that the nine countries with the highest usual quantity of beer intake per drinking day are situated in Northern Europe with a tradition of drinking greater amounts of alcohol on one single occasion.

Figure A3.3.9. Mean quantity of beer in terms of pure alcohol consumed usually on a beer drinking day (centilitres)



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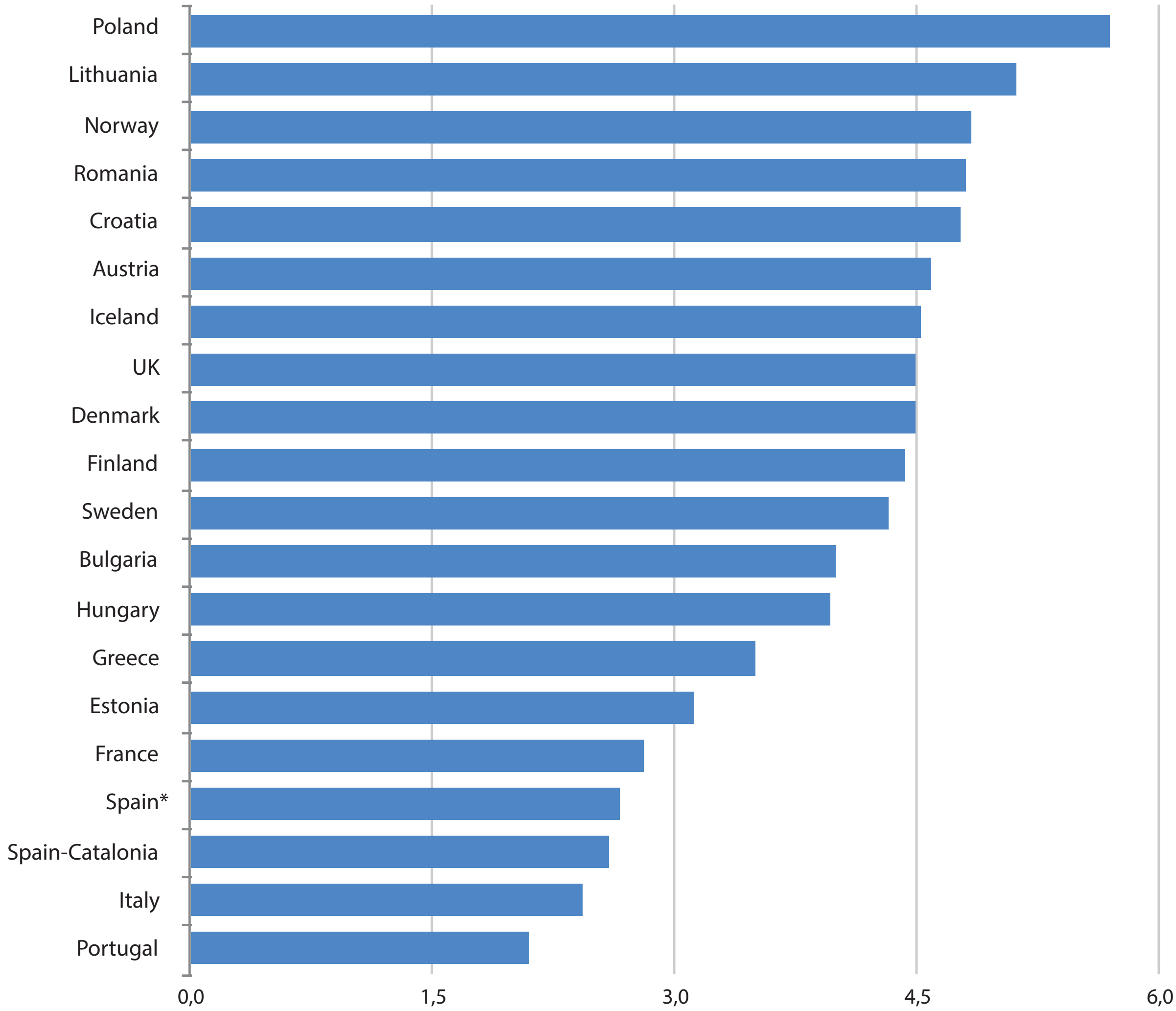
The distribution of mean quantity of wine drunk in a usual day when wine is consumed is less regular (figure A3.3.10). The highest mean intake per drinking day is noted in Poland (5.7 cl), then in Lithuania (5.1 cl). The lowest values are noted in Portugal (2.1 cl), Italy (2.4 cl), and in both samples from Spain: Spain-Catalonia (2.6 cl) and Spain (2.7 cl).

Similarly as for beer consumption, the greatest amount of wine (in terms of pure alcohol) consumed on a wine drinking day is seen in the Northern countries (i.e., taking a threshold of > 4 cl pure alcohol from wine), while the Southern and Mediterranean countries clearly lie beneath that threshold.

Figure A3.3.10. Mean quantity of wine in terms of pure alcohol consumed usually on a wine drinking day (centilitres)



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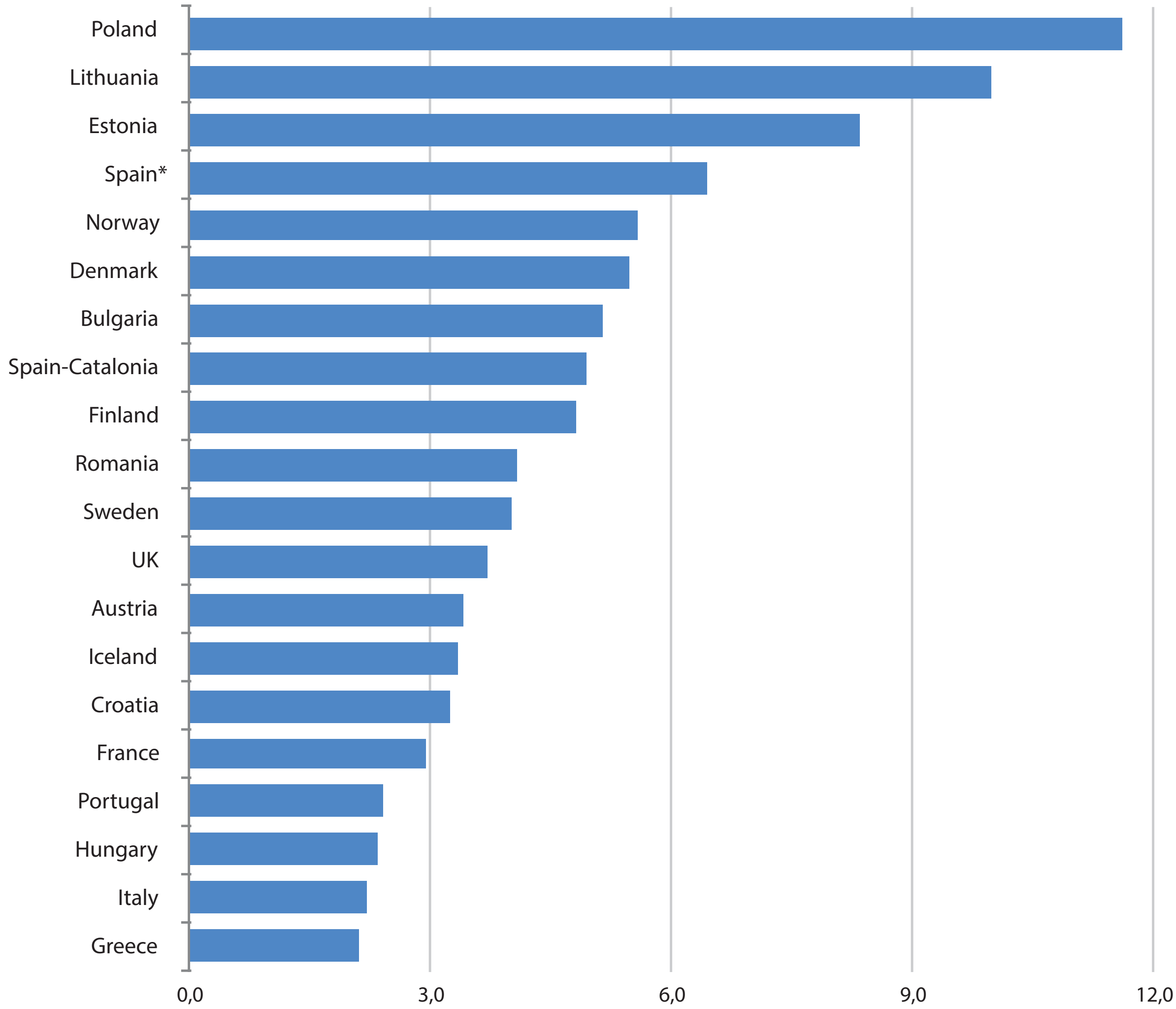
The mean quantity of pure alcohol usually consumed per spirits drinking day shows a wider dispersion across the countries (figure A3.3.11) than was the case for beer and wine (figures A3.3.9 and A3.3.10). Here the values range from 11.6 cl in Poland to 2.1 cl in Greece.

Looking at the country distribution between these extreme values (figure A3.3.11) for spirits, Lithuania (10.0 cl), Estonia (8.3 cl) and Spain (6.4) score in the top 4 highest drinking quantities on a drinking day next to Poland (11.6 cl), while Italy (2.2 cl), Hungary (2.3 cl) and Portugal (2.4 cl) join Greece (2.1) among the bottom four lowest quantities of spirits drunk per drinking day.

Figure A3.3.11. Mean quantity of spirits in terms of pure alcohol consumed usually on a spirits drinking day (centilitres)



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Like the case for beer and wine, one can distinguish a North-South distinction of the European countries regarding the quantity of alcohol derived from spirits on a drinking day (at a threshold of about 4 cl), with the exception of Spain , including Spain-Catalonia that shift here to the category of high quantity values on the spirits drinking days (which was not the case for beer and wine).

Annual alcohol consumption structure by type of alcoholic beverage

The estimate of the average annual consumption of a given beverage type integrates information about the frequency of drinking this beverage (converted into the number of drinking days in the past 12 months) and the usual alcohol intake (expressed in centilitres of pure alcohol) in a day when this beverage is consumed. Adding the estimates of annual volume of pure alcohol obtained in this manner for beer, wine and spirits results in the total annual consumption of pure alcohol (any type) calculated per country.

The percentages presented in the results section hereunder express the relative proportions of the total quantity of pure alcohol consumed that are attributed to beer, wine and spirits. Figure A3.3.12 depicts the structure of alcohol consumption, based on the share of pure alcohol consumption derived from beer, wine and spirits (no additional beverage type was included in the analysis). Comparing the relative importance of the shares of annual consumption attributed to the different beverage types sheds light on the drinking culture of the participating countries.

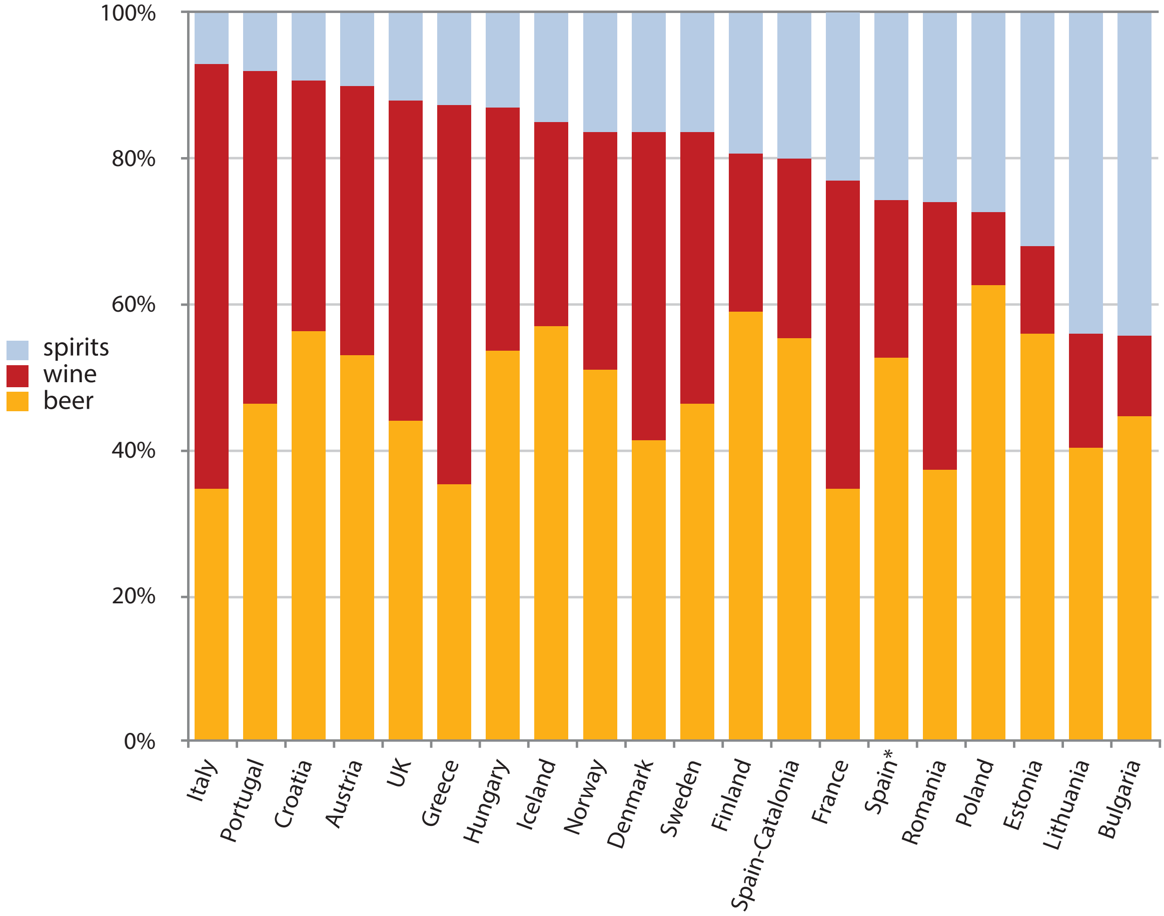
As regard to figure A3.3.12, the countries are ordered on the basis of the relative importance of spirits accounting for the annual consumption of pure alcohol (7.1% – 44.6%), starting with the countries where spirits contribute the least to the total amount of alcohol consumed.

<u>Beer consumption</u>: Beer dominates the total annual alcohol consumption in 12 countries, namely Croatia, Austria, Hungary, Iceland, Norway, Sweden, Finland, Spain, including Spain-Catalonia Poland, Estonia, and to a lesser extent Portugal and Denmark (where the proportions attributed to wine are very close to those of beer). In 10 of these countries, beer consumption constitutes more than half of the total annual consumption. The largest share of beer is noted in Poland (62.6%).

<u>Wine consumption</u>: Italy (58.5%) and Greece (51.8%) are the two countries where wine holds the largest share of the total annual pure alcohol consumption. Without being clearly dominant, wine also has a relatively important share of alcohol intake in France, Romania, Portugal and Denmark. On the other hand, wine has a small share of the annual alcohol consumption in Poland, Estonia, Lithuania and Bulgaria.

<u>Spirits consumption</u>: Spirits has a dominant position on the total annual consumption scenery in Lithuania only (44.1%) and in Bulgaria where spirits and beer have similar share (spirits 44.6% and beer 44.5%). Italy and Portugal are countries in which spirits bear the least contribution to the total annual consumption of pure alcohol.

Figure A3.3.12. Structure of alcohol consumption, based on the relative proportion (%) of the annual volume of pure alcohol derived from consuming beer, wine and spirits



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Because the total annual alcohol intake appears to come predominantly from beer consumption, further analyses are undertaken in this respect. The share of beer in the structure of alcohol consumption by gender and age groups is presented in table A3.3.4. Among men, beer dominates the alcohol consumption habits in most countries. Beer also seems to be gaining an important position in women's drinking behaviours: in 15 out of the 20 participating countries, beer represents between 30 and 50 per cent of female alcohol consumption. In almost all countries, the share of beer in the structure of alcohol consumption is higher among males than females except for Bulgaria and Romania, where the share of spirits, mainly consumed by men, is relatively high. The highest gender ratio is noted in the UK, where the percentage of alcohol consumed as beer among males is more than three times higher than among females.

Table A3.3.4. Proportion (%) of the total annual volume of pure alcohol consumed as beer by gender and age group

	Total	Male	Female	Gender ratio	18–34	35–49	50+
Austria	52.8	62.8	29.8	2.1	52.0	54.6	52.0
Bulgaria	44.5	42.3	47.8	0.9	47.1	45.8	41.1
Croatia	56.3	58.3	40.4	1.4	63.5	59.4	45.2
Denmark	41.4	51.7	26.0	2.0	43.0	47.0	37.3
Estonia	55.8	60.3	28.1	2.1	59.4	56.9	49.3
Finland	58.9	65.4	37.5	1.7	67.6	60.0	48.1
France	34.5	36.0	30.3	1.2	46.0	31.3	27.0
Greece	35.4	37.7	28.0	1.3	40.6	36.9	27.1
Hungary	53.7	56.9	39.2	1.5	65.5	52.5	48.1
Iceland	56.8	65.0	42.9	1.5	61.8	60.4	44.8
Italy	34.5	35.0	33.1	1.1	50.2	38.9	18.1
Lithuania	40.3	42.3	32.2	1.3	46.3	37.0	37.8
Norway	50.9	58.2	32.6	1.8	64.2	53.4	30.3
Poland	62.6	66.9	46.0	1.5	63.0	62.2	62.4
Portugal	46.3	47.3	40.3	1.2	56.2	46.3	39.0
Romania	37.2	36.9	40.1	0.9	47.8	38.0	26.9
Spain*	52.4	55.3	44.6	1.2	47.3	56.5	52.1
Spain-Catalonia	55.2	56.7	50.8	1.1	56.1	55.0	54.3
Sweden	46.1	55.1	26.1	2.1	56.0	44.9	36.2
UK	43.8	57.1	18.3	3.1	44.1	46.9	40.3

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Beer has a dominant position among the young people in most countries. In 11 countries, the largest percentage of alcohol consumed as beer is seen in the youngest generation (18–34). The largest share is seen in Finland (67.6%) and then in Hungary (65.5%) and in Norway (64.2%). The lowest share, but still high, for beer consumption in youth is observed in Denmark (43.0%). In three countries only (Denmark, Spain and UK) beer dominates in the consumption of the middle age group (35–49). Finally, in Austria, Poland and Spain-Catalonia beer consumption is not differentiated across the age groups. In other words, beer constitutes a similar proportion of the overall alcohol consumption in all three age groups, around 52–55%, 62–63% and 54–56%, respectively.

Risky Single Occasion Drinking (RSOD)

A measure of more intensive, concentrated consumption taking place within a short time has become recognized as a critical measure of an alcohol drinking pattern. A drinking pattern which consists of consuming, on one occasion, a volume of alcohol that is likely to lead to intoxication is considered to be risky from the perspective of public health as well as public order. Such a drinking pattern, called Risky Single Occasion Drinking (RSOD), increases the risk of acute health problems, accidents, behavioural disorders, law breaking behaviours, and so on. Its frequency is one of the factors predicting prevalence of acute problems at least on the population level (WHO 2000). RSOD could be considered an amount of alcohol consumption that leads to intoxication and contributes to a major burden of disease (Rehm et al., 2004).

Other terms used as alternatives to Risky Single Occasion Drinking are, for example, Heavy Episodic Drinking (HED), Binge Drinking, Risky Episodic Drinking, Episodic Heavy Drinking (EHD) or Extreme Drinking.

RSOD is usually defined as exceeding a certain amount of alcohol on one occasion. The indicator most often used within population surveys is based on a dose of approximately 60 grams of ethanol. However, there is no agreement in Europe even regarding the legally accepted blood alcohol concentration level in driving, let alone about what is risky drinking for a single drinking occasion more generally. It is also not clear whether it should be gender specific or what timeframe should be applied (Bloomfield, Hope, Kraus 2013).

For assessing prevalence of drunkenness, using a fixed threshold for alcohol consumed on one occasion can be considered as only a very rough approximation. There are great individual differences in reaction to alcohol. Blood alcohol concentration and alcohol tolerance are dependent on gender, bodyweight, duration of drinking, drinking experience, and so on. It could vary with time even for the same individual. Therefore, some people could be drunk, in behavioural terms, after drinking lower amounts than the RSOD threshold, and some people could behave sober after drinking larger amounts.

In some surveys, questions about (subjective) drunkenness are used instead of, or in addition to, questions about RSOD. However, asking directly about drunkenness in a comparative multi-country study is even more problematic because not only is the concept understood differently across countries, but also there is often no uniform understanding as to what constitutes drunkenness within countries, and in addition, when translated, different words with different connotations need to be used. Moreover, we have to rely on the respondent's self-assessment, which could be biased. For example, young males have a tendency to overestimate the volume of alcohol which they can consume without experiencing drunkenness symptoms (Thicket et al. 2013).

There are basically two problems related to the RSOD question. The first one is related to the concept of a standard drink which is not so common in European drinking cultures. Some common measures for various alcoholic beverages are needed to calculate and report volume of alcohol consumed on one occasion, especially when various beverages are drunk during the same drinking episode. To answer a question about the frequency of exceeding a certain threshold (e.g. 60 grams of pure alcohol) could be challenging for respondents, even when this threshold is formulated in terms of country specific units of particular alcoholic beverages.

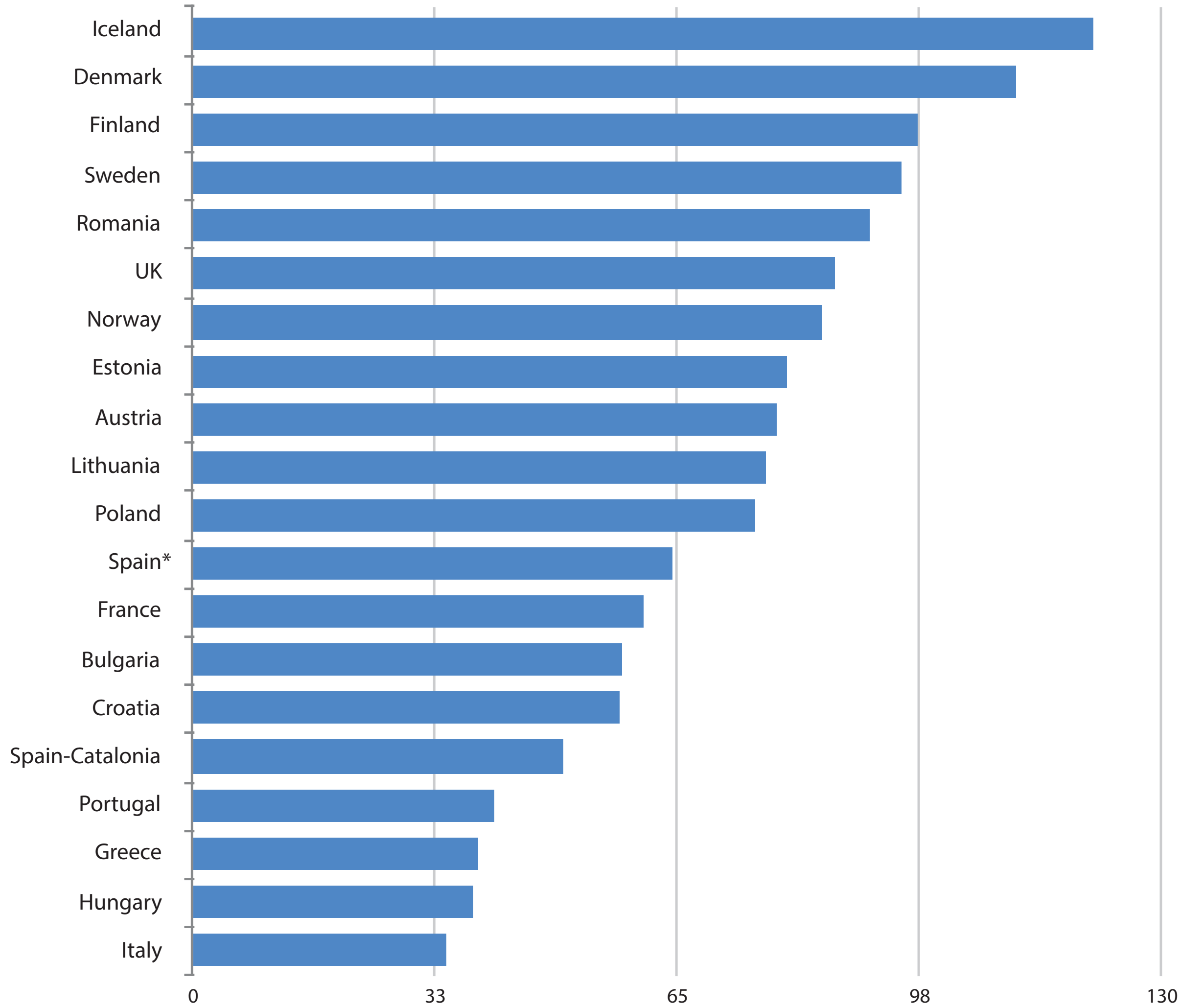
The second problem is related to the concept of an 'occasion', which is difficult to define precisely. For example, six shots of vodka with work mates in a short time could constitute one occasion, as well as a three day wedding party with huge volumes of various alcoholic beverages drunk in different configurations.

In this study, Risky Single Occasion Drinking (RSOD) was defined as consumption of at least 60 grams of pure alcohol by males on one occasion and at least 40 grams of pure alcohol by females. In order to explore the use of more extreme amounts on single occasions, a question about frequency of drinking 120+ grams of pure alcohol for males and 80+ grams of pure alcohol for females was also used, as well as questions on maximal number of standard drinks on one occasion in the past 12 months and on subjective drunkenness. Details on these questions and their application in calculations can be found in the Methods section.

However, the first indicator of extreme alcohol consumption in the countries is derived on the basis of the question on maximum alcohol intake on one occasion. As presented in figure A3.3.13, on average the highest maximum alcohol intake on one occasion is reported in Iceland (121 grams of pure alcohol) and Denmark (111 grams of pure alcohol). In Finland, Sweden, Romania, UK, Norway, Estonia, Austria, Lithuania, and Poland that average was between 100 grams and 75 grams. An average volume lower than 50 grams was noted in Italy (34 grams), Hungary and Greece (both 38 grams) and Portugal (40 grams).

The lowest values of maximum intake on one occasion are noted in traditional wine countries from South and Central Europe and the highest ones in Nordic Countries that in the past used to be classified traditionally as sprits cultures.

Figure A3.3.13. Mean of the maximum quantity of alcohol consumed on one occasion in the past 12 months (mean grams of pure alcohol per single occasion among drinkers only)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The frequency distribution of RSOD drinking by country is shown in Figure A3.3.14 for a threshold of 60 grams of pure alcohol on one occasion for men and 40 grams for women (20 surveys) and in Figure A3.3.15 for a threshold of 120 grams for men and 80 grams for women (18 surveys). The highest proportion of the population reporting RSOD *at least once* in the past year (Figure A3.3.14 and Table A3.3.5) using the threshold of 60/40 grams pure alcohol on one occasion is noted in Denmark (66.5%), Lithuania (65.8%) and Sweden (63.9%). The higher threshold (120/80 grams; Figure A3.3.15 and Table A3.3.5) is exceeded by 39.9% of drinkers in Iceland, 38.6% in Denmark and 63.0% in Finland. The lowest prevalence of drinking 60/40 grams on one occasion is noted in Italy (8.8%), Portugal (11.3%) and Hungary (12.4%). Also the lowest percentage of respondents drinking at least 120/80 grams is found in Hungary (3.0%).

For countries with a high prevalence of RSOD drinking, monthly and weekly RSOD drinking are better measures. The proportion of monthly RSOD drinkers is shown in Table A3.3.6 (using the threshold of 60/40 grams), in addition to Figures A3.3.14 and A3.3.15. For both RSOD thresholds, *weekly* RSOD drinking is most common in Bulgaria and the UK. The highest percentage of *monthly* RSOD using the threshold of 60/40 grams is detected in Iceland (28.4%), Lithuania (28.2%) and Denmark (27.1%) and the lowest ones in Italy (2.9%), Portugal (6.0%) and Hungary (6.5%). Highest proportions of monthly drinking of the higher threshold (120/80 grams) are found in the Nordic countries and the UK, i.e. largely in the same countries as when using the lower threshold.

Figure A3.3.14. Distribution of respondents (%) according to their frequency of drinking at least 60 g alcohol (men) / 40 g alcohol (women) on one occasion in the past 12 months

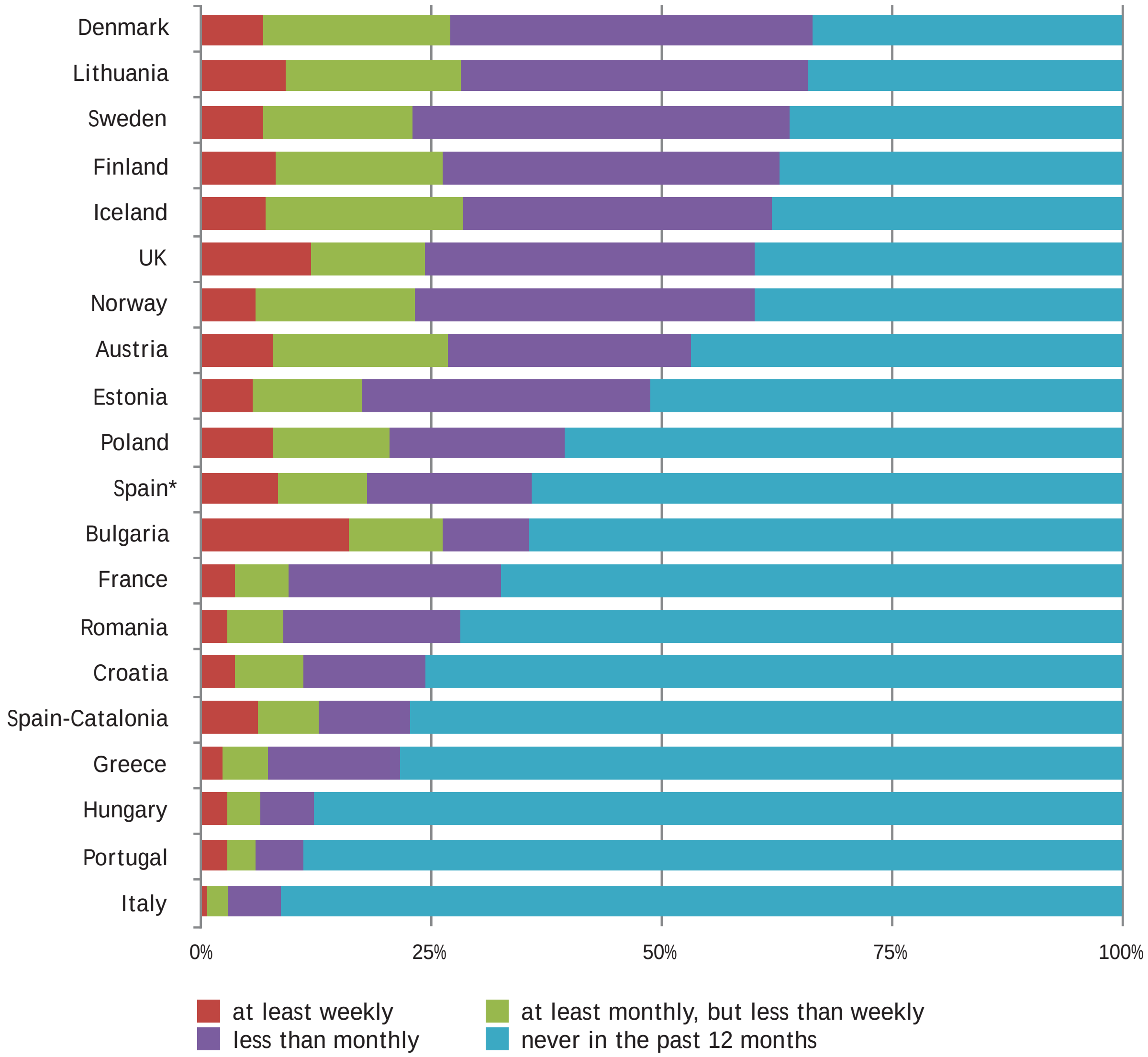


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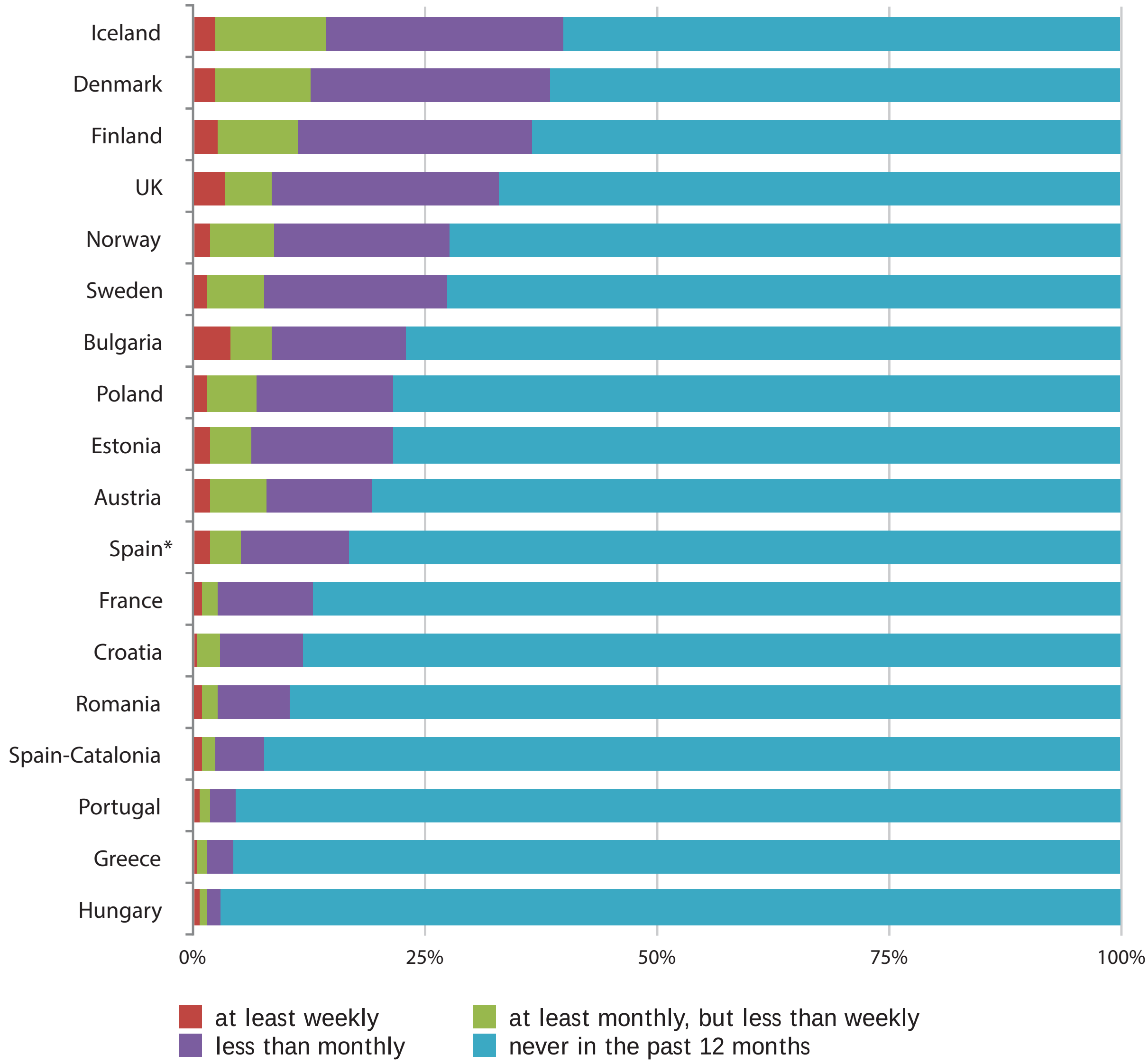
Figure A3.3.15. Distribution of respondents (%) according to their frequency of drinking at least 120g alcohol (men) / 80g alcohol (women) on one occasion in the past 12 months



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The prevalence of RSOD drinking is strongly differentiated by gender. With the exception of two countries, the proportion of RSOD drinkers in all countries is higher among males then females regardless of the threshold applied (Table A3.3.5). The first exception is Iceland where for both thresholds the proportion of RSOD drinkers is higher among females than males. The second one is Bulgaria with a higher proportion of RSOD drinkers among females than among males but only for the 60/40+ grams threshold. The highest gender ratio is noted in Portugal, where the proportion of lower level RSOD drinkers among males is almost 8 times higher than among females. The respective ratio for drinking at least 120/80 grams per occasion at least once in the past 12 months is even higher, i.e. close to 10.

Table A3.3.5. Proportion of all respondents (%) who report having drunk at least 60 g (men) / 40 g (women) and at least 120 g / 80 g alcohol on one occasion at least once in the past 12 months

	Total		Male		Female	
	40/60 +	80/120 +*	60 +	120 +*	40+	80+*
Austria	53.3	19.4	54.8	22.2	51.8	16.6
Bulgaria	35.8	23.0	31.9	22.7	39.7	23.2
Croatia	24.4	11.9	35.0	19.2	13.9	4.6
Denmark	66.5	38.6	72.6	44.8	61.2	33.1
Estonia	48.9	21.5	62.2	36.3	36.6	8.0
Finland	63.0	36.6	71.4	48.5	54.4	24.4
France	32.6	13.1	33.7	16.0	31.5	10.4
Greece	21.8	4.2	25.9	6.0	17.8	2.5
Hungary	12.4	3.0	17.1	4.3	7.7	1.7
Iceland	62.0	39.9	59.4	38.8	64.5	41.1
Italy**	8.8	-	7.8	-	9.7	-
Lithuania**	65.8	-	70.2	-	61.8	-
Norway	60.0	27.8	65.7	35.3	53.9	20.0
Poland	39.5	21.7	48.3	29.2	30.9	14.2
Portugal	11.3	4.6	20.5	8.6	2.6	0.9
Romania	28.2	10.4	45.4	16.3	12.3	5.2
Spain***	36.1	16.9	39.6	20.7	32.4	13.1
Spain-Catalonia	22.8	7.9	22.5	8.4	23.2	7.3
Sweden	63.9	27.5	69.6	31.7	58.5	23.6
UK	60.2	33.1	67.0	41.7	53.6	24.9

* Percentages of those reporting 80/120+ grams are included in percentages of those reporting 40/60 + grams

** The question on 80/120 grams was not applied

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For the proportion of *monthly* RSOD drinkers, the same general pattern can be observed, i.e. the proportions are higher among males than females (Table A3.3.6). The highest gender ratios are noted in Portugal (6.6) and in Romania (5.5), the lowest ones, besides Bulgaria, in Spain-Catalonia (1.0), Italy and Iceland (both 1.1).

In most countries the highest percentages of respondents reporting RSOD at least once a month is observed in the youngest group (18–34) while the lowest prevalence is observed in the oldest group (50–64), except for Sweden and Denmark where the age category with the lowest prevalence is the middle aged group (34–49). In Poland, Lithuania and Bulgaria the distribution of RSOD across age groups is different than in most countries. In Poland the prevalence is more or less equal in the first two age groups and lower in the oldest group. In Lithuania the prevalence is the same in all age groups and in Bulgaria the prevalence is the lowest in the youngest age group and higher in the two older age groups.

Table A3.3.6. Proportion of all respondents (%) who report having drunk at least 60 g (men) / 40 g (women) on one occasion *at least once a month* in the past 12 months, by gender and age group (per cent of total population)

	Total	Male	Female	Gender ratio	18–34	35–49	50+
Austria	26.8	30.0	23.7	1.3	34.0	24.2	21.7
Bulgaria	26.5	24.9	27.9	0.9	22.7	28.6	28.2
Croatia	11.1	16.7	5.5	3.0	16.8	8.4	7.7
Denmark	27.1	31.9	23.0	1.4	37.4	20.6	25.4
Estonia	17.5	27.1	8.6	3.2	24.9	15.3	10.9
Finland	26.5	35.3	17.4	2.0	39.3	20.6	18.6
France	9.7	11.5	8.0	1.4	16.8	6.6	6.0
Greece	7.3	10.4	4.3	2.4	11.5	6.8	3.8
Hungary	6.5	9.5	3.5	2.7	7.8	6.4	5.2
Iceland	28.4	30.2	26.7	1.1	36.8	26.0	19.8
Italy	2.9	3.1	2.7	1.1	6.2	2.0	0.9
Lithuania	28.2	38.2	18.8	2.0	27.8	29.0	27.8
Norway	23.2	29.1	16.9	1.7	38.1	15.4	13.5
Poland	20.5	28.3	12.7	2.2	22.1	22.8	16.2
Portugal	6.0	10.6	1.6	6.6	8.1	5.5	4.2
Romania	9.2	16.0	2.9	5.5	12.1	8.8	6.2
Spain*	18.2	21.4	15.0	1.4	23.8	18.6	11.0
Spain-Catalonia	12.9	12.6	13.1	1.0	23.0	11.6	3.8
Sweden	22.9	27.8	18.1	1.5	28.0	16.8	23.3
UK	24.4	30.2	18.8	1.6	30.7	24.5	18.0

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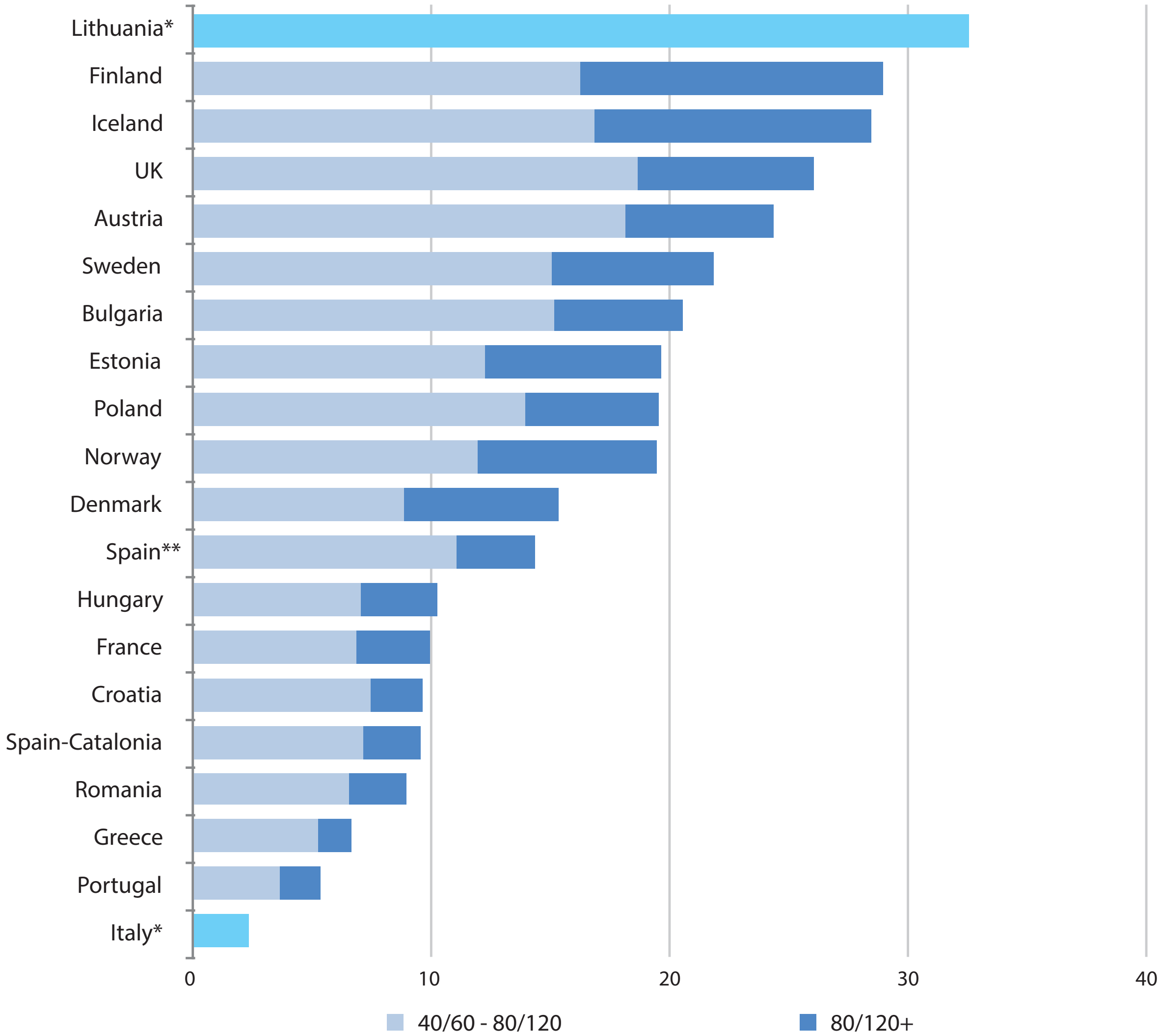
When comparing drinking cultures, one question of interest is the degree of intoxication orientation, i.e. the proportion of either all drinking days or of the total volume of alcohol drunk made up by heavy drinking occasions. The results of these comparisons are shown in Figure A3.3.16 for drinking days and in Figure A3.3.17 for the volume of consumption .

The first observation to be made on the basis of Figure A3.3.16 is that even in the countries with the highest proportion of RSOD drinking days, the majority of drinking occasions, by far, are not RSOD occasions. When looking at the proportion of all alcohol that is drunk in RSOD occasions (Figure A3.3.17), the proportions are of course clearly higher but still always under 50%. However, the variation between countries is great.

The highest proportion that RSOD drinking days (at least 40/60 grams) make of all drinking days is observed in Lithuania (32.5%), then in Finland (28.9%), Iceland (28.4%), UK (26.0%) and Austria (24.3%). The lowest percentages are in Italy (2.3%), Portugal (2.3%), and Greece (6.7%).

If 80/120 grams is considered the threshold of RSOD drinking, the highest percentages of drinking days at or above this level are noted in Finland (12.7%), Iceland (11.6%), Norway (7.5%), Estonia (7.5%), and UK (7.4%), while the lowest ones are in Greece (1.4%), Portugal (1.7%), Croatia (2.1%), Spain-Catalonia (2.3%), and Romania (2.5%).

Figure A3.3.16. Proportion (%) of the total number of drinking days that are RSOD drinking



* The question on 80/120 grams was not applied, the bar reflects data for 40/60+

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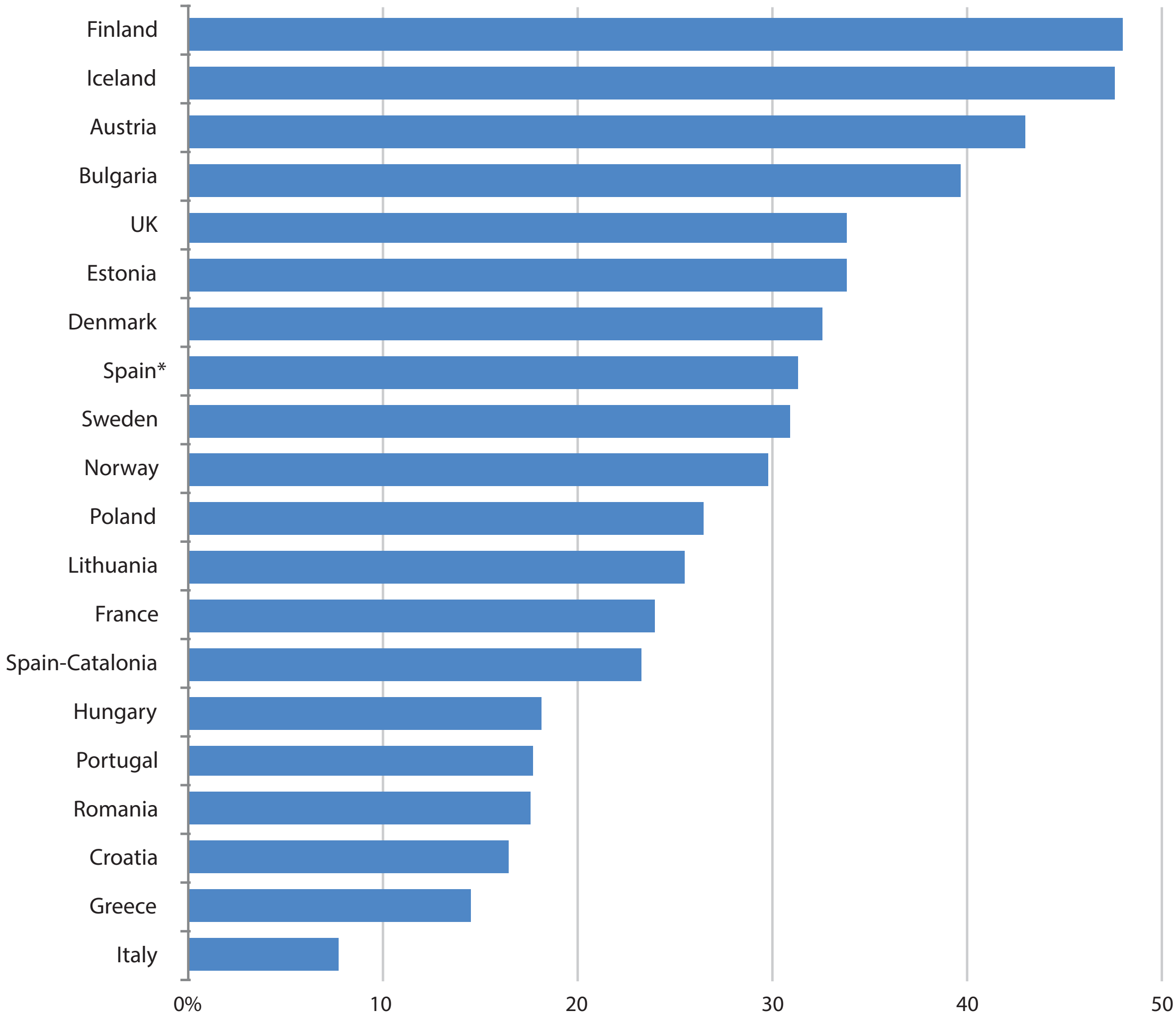
Figure A3.3.17. Proportion (%) of alcohol attributed to RSOD in total alcohol consumption



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It seems that this indicator reflects the tradition of heavy episodic drinking in countries from Northern Europe. Out of the six countries with the highest percentage of all drinking days that are 40/60g+ RSOD days, only Austria is not located in that part of Europe.

Comparing ranking of countries in Figures A3.3.16 and A3.3.17, we find a lot of similarities. The bottom of the ranking is occupied by the same countries with vine-growing traditions, while in both lists Iceland, Finland, the UK, and Austria are among the countries with highest proportions of RSOD.

Subjective drunkenness

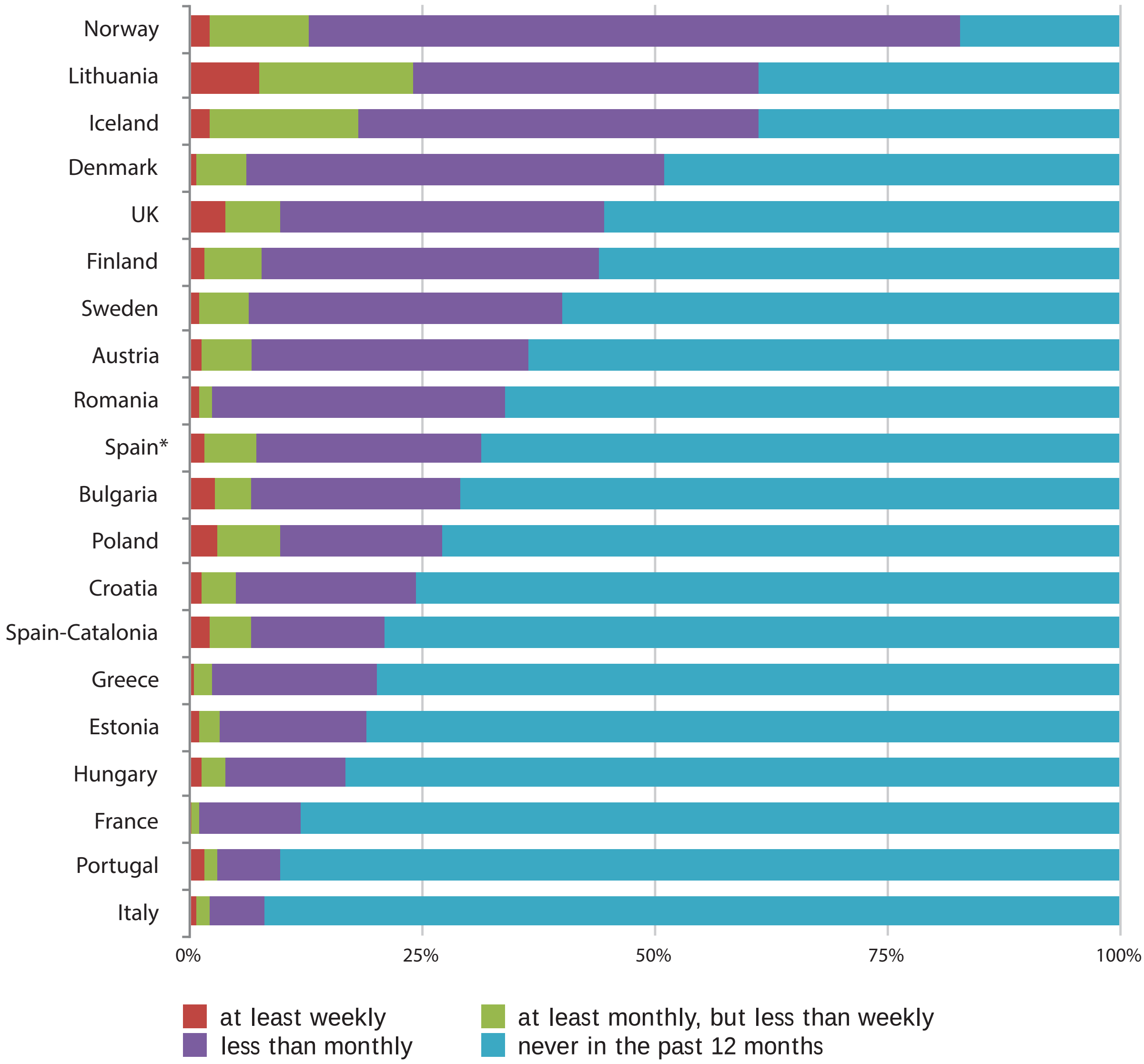
Risky single occasion drinking is defined on the basis of certain thresholds of levels of drinking. This is, however, of limited value as an indicator of drunkenness, due to many reasons pertaining to variations in alcohol tolerance levels. Therefore, a direct question about the frequency of drunkenness defined as feeling unsteady on one's feet or having his speech slurred was used in the survey. Additionally, it was supplemented by an optional question about the volume of alcohol which is usually needed to be drunk.

There are huge variations in the proportion of respondents reporting drunkenness at least annually (figure A3.3.18). The lowest one is in Italy (8.1%) and the highest one is in Norway (82.8%). Countries with the highest prevalence of drunkenness are located in Northern Europe. Apart from Norway, these are Lithuania (61.2%), Iceland (61.1%), Denmark (50.9%), UK (44.7%), Finland (44.2%) and Sweden (40.1%). Countries with the lowest prevalence (below 20%) are more likely situated in Southern Europe and wine drinking areas – besides Italy (8.1%), there are Portugal (9.8%), France (12.0%) and Hungary (16.9%). Estonia appears to be an exception to this north-south gradient with a lower prevalence of annual drunkenness (19.1%). Poland and Spain, also seem to partly differ from this scheme.

Focusing on more frequent drunkenness prevalence (monthly or weekly), which could be a greater concern for public health, does not change the general picture. There are slight modifications in the ranking among northern countries, and among southern countries, but the contrast between north and south remains unchanged. Lithuania reaches the first position with a quarter of the population experiencing drunkenness every month, while France is at the bottom with only 1% declaring this behaviour. Poland joins the group of northern high prevalence countries while Denmark and Sweden show relatively low prevalence for this indicator for northern countries. Spain, including Spain-Catalonia, and Estonia remain outliers among respectively southern and northern groups of countries.

The very large difference of drunkenness prevalence level between countries like Lithuania, Iceland or Norway and countries like France, Italy or Portugal, seems to be clearly related to different drinking culture. In northern drinking cultures, the social acceptability of drunkenness may be higher than in southern wine drinking countries. This could explain the difference in the frequency of this type of behaviour but also a possible greater reluctance to admit being drunk in southern countries which could also contribute to lower the reported prevalence in these countries.

Figure A3.3.18. Distribution (%) of respondents according to the frequencies of drunkenness in the last twelve months (per cent of total population)



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In all countries, getting drunk is a behaviour more frequent among men than among women (Table A3.3.7). The proportion of men who get drunk at least every month reaches the very high level of one man out of three in Lithuania, one out of four in Iceland and one out of six in Norway. The gender ratio for the prevalence of getting drunk at least once a month varies between 1.5 in Italy and Bulgaria to 5 in France and almost 7 in Romania. Italy is the only country with a non significant difference of prevalence between men and women. In the fourteen countries showing the smaller gender ratio, the variations of this indicators is relatively limited (from 1.5 to 2.9). The gender ratio gets really higher only in the six remaining countries, which are, apart from Romania and France, Croatia, Greece, Hungary and Estonia. No clear pattern emerges from the ranking of countries according to the gender ratio.

Table A3.3.7. Prevalence of getting drunk at least once a month by gender and age group (per cent of total population)

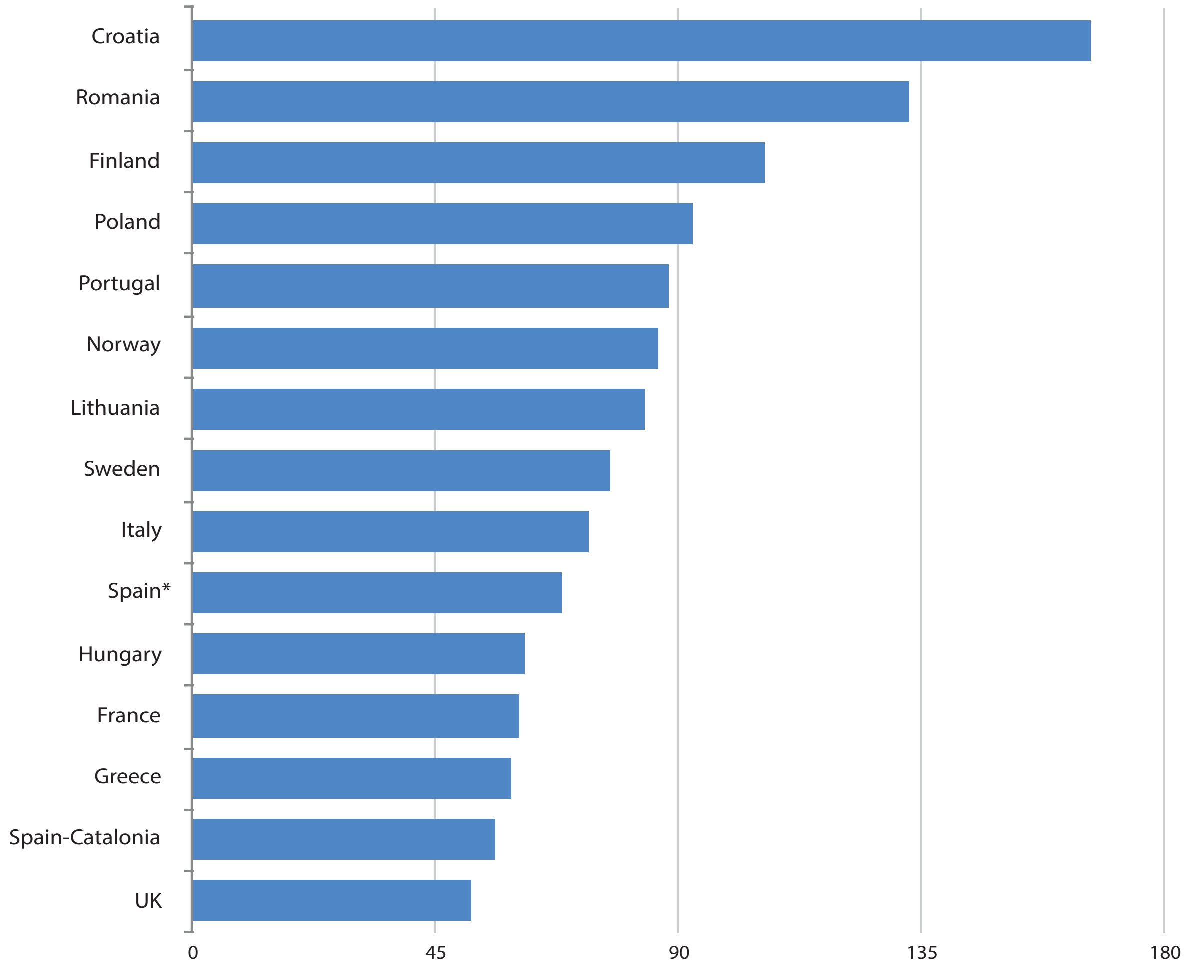
	Total	Male	Female	Gender ratio	18–34	35–49	50+
Austria	6.7	9.3	4.1	2.3	11.2	4.3	4.4
Bulgaria	6.6	8.0	5.3	1.5	5.0	6.8	8.3
Croatia	5.1	8.3	1.8	4.5	*5.2*	5.0	5.0
Denmark	6.0	7.9	4.4	1.8	12.6	4.2	3.0
Estonia	3.2	5.2	1.4	3.6	*3.9*	3.3	2.4
Finland	7.7	11.4	3.9	2.9	11.6	6.5	4.8
France	1.0	1.7	0.3	5.0	1.9	0.7	0.3
Greece	2.4	3.9	0.9	4.2	5.6	1.2	0.7
Hungary	4.0	6.3	1.7	3.8	*2.8*	4.8	4.2
Iceland	18.3	24.3	12.3	2.0	30.8	11.7	8.6
Italy	2.1	2.6	*1.7*	1.5	3.5	1.4	1.7
Lithuania	24.2	36.1	13.2	2.7	*22.5*	24.7	25.5
Norway	12.8	16.4	8.0	2.1	19.1	8.4	7.0
Poland	9.7	14.4	5.0	2.9	*11.5*	8.8	8.5
Portugal	3.1	4.6	1.7	2.8	*2.9*	2.6	3.8
Romania	2.4	4.0	0.6	6.9	*2.9*	2.0	2.3
Spain*	7.1	9.3	5.0	1.8	11.4	6.3	3.2
Spain-Catalonia	6.7	9.4	4.0	2.4	12.6	4.7	3.3
Sweden	6.5	8.7	4.4	2.0	12.4	2.6	3.5
UK	9.9	12.8	7.0	1.8	16.4	10.0	3.5

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

In a large majority of countries, the prevalence of drunkenness at least monthly is higher in the younger age group and diminishes with age. The decrease of the prevalence between the 18–34 and 35–64 age group is significant in Greece, France and also in the UK and in Denmark, and more limited in Italy. In several countries like Romania, Poland, Estonia and Croatia the variation is not significant. The prevalence increases in Bulgaria, Hungary, Portugal and Lithuania but the variation is also not significant except in Bulgaria. Among the 18–34 age group a threshold is very apparent between the two groups of countries that have already been mentioned in the analysis of the overall prevalence of drunkenness. In the group of northern countries (Estonia excepted) and in Spain and Austria, the prevalence of getting drunk at least once in the month is over 11%, reaching 30% in Iceland. In the second southern and wine drinking group the maximum prevalence falls to less than 6% for Greece and diminishes to less than 2% for France. In the two other age groups, the decrease of prevalence among countries is continous and no such threshold can be found. Lithuania seems, however, to differ from all other countries with a very high prevalence for all age groups.

The optional question on the volume of alcohol needed for intoxication was applied in 15 surveys. The results are presented in figure A3.3.19. The biggest mean values of alcohol reported as needed for intoxication are observed in Croatia (166 grams of pure alcohol corresponding to over half a litre of 40% vodka). The lowest mean value is noted in UK (52 grams of pure alcohol). There is no clear relation between the ranking of the countries according to this indicator and according to the level of drunkenness prevalence. The variation in the volume which is considered in the different countries to be needed for drunkenness does not seem to explain the differences in the level of frequency of drunkenness between northern and southern wine drinking countries.

Figure A3.3.19. Mean volume of alcohol needed for intoxication (in grams of pure alcohol)



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Conclusions

The BSQF approach along with RSOD questions provide an opportunity to analyse a wide range of indicators of various aspects of alcohol consumption enriching our knowledge about drinking culture as well as providing information useful for designing health policy.

European drinking culture was never homogenous. In the past three traditional drinking patterns were identified:

- Based on spirits drunk not very frequently but usually in high quantities on one occasion, characteristic of Northern and Eastern Europe (Nordic Countries, Poland, Baltic Countries).
- Based on wine consumed on a daily basis as an element of everyday diet present in Southern Europe (Mediterranean Countries, Balkans, several Central European countries like Austria).
- Based on beer also drunk frequently, but not in big amounts per one occasion – Central European Countries like Germany, Czech Republic but also UK.

This was of course more of a typology rather than a classification because there are countries which were in the grey zone like Austria, where traditionally both wine and beer drinking cultures coexisted.

The results of the RARHA SEAS show that in most countries beer is the dominant alcoholic beverage as in 13 countries most alcohol is consumed as beer. In two countries beer shares its dominant position with wine and wine dominates in annual consumption only in three countries. Spirits still dominates in only 2 countries.

This suggests that traditional patterns, though still present, have undergone substantial changes, in particular as regards beverage preferences. For example, in Poland beer is the most commonly consumed, with the highest frequency compared to other beverages and constitutes the lion's share of the annual consumption. Only intake of spirits per day, that used to be the dominant feature of the traditional drinking pattern, is still the highest in relation to remaining beverages.

Norway, Iceland and Finland, traditionally spirits countries, now prefer beer (highest intake per drinking day, frequency of drinking and average consumption) but in respect to percentage of consumers, wine seems to be most commonly drunk.

Among countries where wine constitutes the highest share of alcohol consumed, besides traditional wine-culture countries like Greece, Italy or France, there are also UK and Denmark, where beer formerly played the main role. In both latter countries wine is dominant in terms of percentage of consumers, frequency of drinking as well as average annual consumption. With respect to intake per drinking day, however, in UK beer and spirits are on the top while in Denmark – spirits.

Spirits still dominate in Lithuania, where the tradition of drinking this beverage dates back to Soviet times or even earlier to feudal tradition. Estonia with similar traditions could be considered a beer country now with beer having a dominant share of consumption.

Bulgaria – a big wine producer – now seems to have become a beer and spirits drinking country. These two beverages with similar average consumption have pushed wine to the margin. Beer is in first place with respect to percentage of consumers and frequency of drinking, while spirits leads with respect to intake per drinking day.

Despite a progressing homogenisation of drinking cultures across Europe, including beverage preferences and consumption levels, some remnants of traditional drinking patterns still survive, namely frequency of drinking, which is still high among drinkers in southern part of Europe and volume per occasion, which is still higher in countries from the North of our continent.

The frequency of drinking has been discussed earlier, including generic annual frequency per drinker presented in Figure A3.3.5. Generic volume per drinking day calculated by dividing estimated annual consumption per number of drinking days is shown in Figure A3.3.20 below. A north-south gradient emerges here clearly, more sharply than in any other measures. First nine countries with the highest volume of consumption per drinking day are located in northern Europe while six countries from the bottom of the ranking with the lowest consumption volume belong to Mediterranean cultures.

Figure A3.3.20. Mean alcohol consumption per drinking day in centilitres of pure alcohol for alcohol consumers in last 12 months

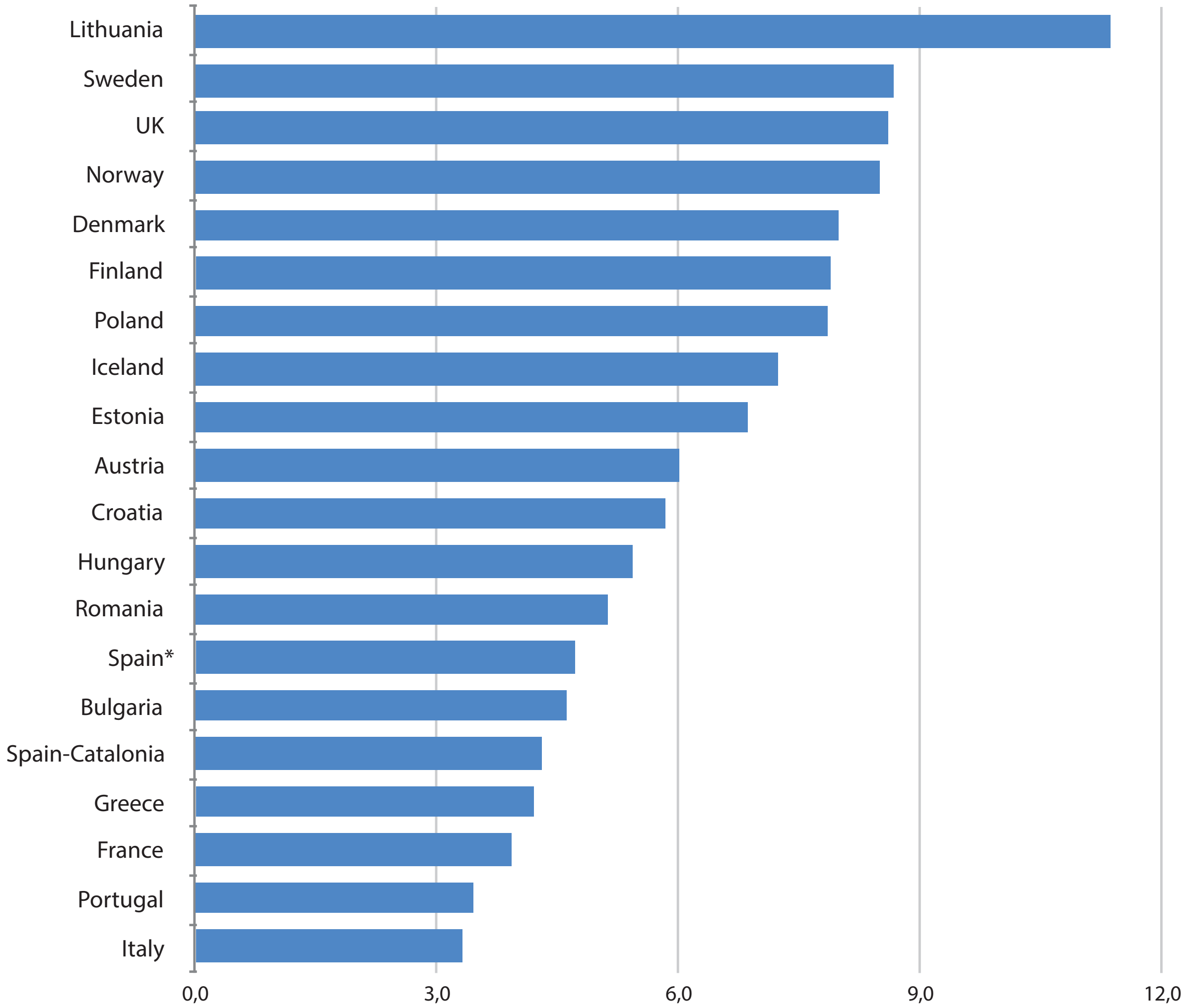

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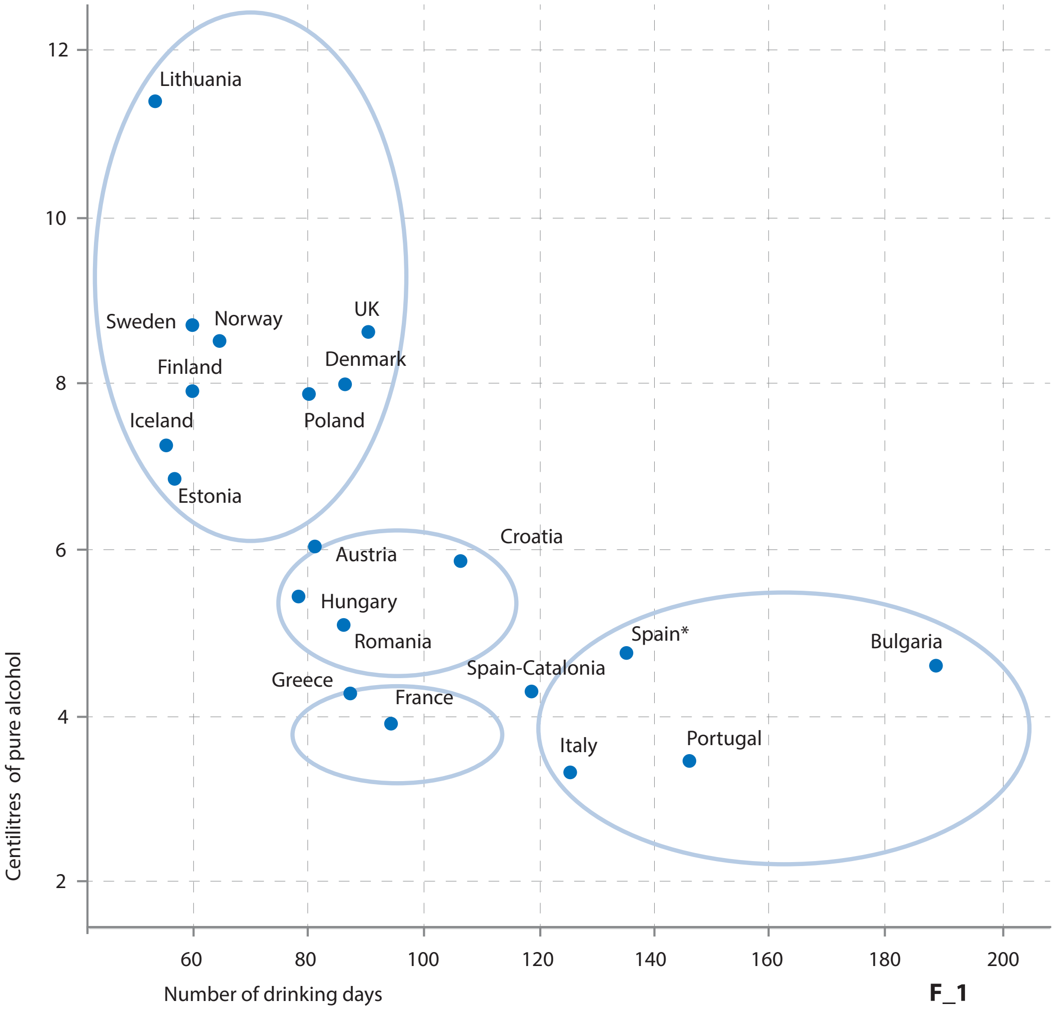
Figure A3.3.21 combining both volume per drinking day and generic frequency of drinking measured by an annual number of drinking days per drinker suggest emergence of two dominant drinking patterns across Europe, which are practically independent of contemporary beverage preferences.

The first pattern characterised by high frequency and low volume per occasion include southern European countries such as Italy, Spain Portugal, and Bulgaria. It is very likely that France and Greece should also be included as their relatively low frequency of drinking can be temporary as in Greece where economic crisis forced people to drink less frequently, or may be related to low coverage rate of recorded consumption as in French survey.

The second pattern characterised by high intake per drinking day and lower drinking frequency independent of beverage type, covers the northern part of the continent and includes Baltic countries, Nordic countries, Poland and UK.

The third pattern consisting of medium frequency and volume include four countries located close to each other, in a crossroad of Europe, somewhere between Mediterranean and northern cultural influences, namely Austria, Croatia, Hungary and Romania.

Figure A3.3.21. Consumption per drinking day in centilitres of pure alcohol against frequency of drinking in number of days in the past 12 months for alcohol consumers



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Reservations and limitations

There are also a number of limitations when estimating alcohol consumption in population surveys. The results are usually lower than statistics of alcohol sales. There are various reasons for that. Respondents usually underestimate their consumption, having difficulties in re-calling all drinking episodes, especially when attempting to measure irregular drinking patterns. Alcohol consumption in some countries is considered morally doubtful, in other cultures drinking is an every day habit or even a component of regular diet. The readiness to report alcohol consumption strongly varies from country to country and may affect levels of drinking volumes reported.

As a result, the proportion of alcohol consumption covered in population surveys in comparison with routine statistics, called coverage rate, is well below 100% and differs from country to country and even across different beverages as it may be more prestigious or more socially desirable to confirm drinking one kind of beverage rather than another one.

As can be seen from table A3.3.8, coverage rates in RARHA SEAS could be regarded as high by international standards and range from over 80% in Bulgaria and Norway to about one third in France and Lithuania. In most countries coverage rates for beer are higher than the respective rates for other beverages. In three countries wine and in two countries spirits have the highest coverage rates.

Table A3.3.8. Coverage rates SEAS versus recorded sales in 2014 (%)

	Beer	Wine	Spirits	Total*	Recorded sales in litres of pure alcohol**
Austria	37.0	37.2	25.9	44.1	12.32
Bulgaria	79.7	29.4	72.0	84.1	12.03
Croatia	78.2	32.1	42.9	49.8	12.14
Denmark	59.1	50.2	52.7	60.1	9.64
Estonia (2011)	47.9	35.1	27.3	39.3	11.61
Finland	51.5	47.7	37.3	54.5	8.8
France	50.0	22.0	31.2	32.1	11.5
Greece	53.9	41.6	27.3	54.0	7.53
Hungary (2013)	56.3	39.4	13.9	38.1	10.88
Iceland	42.8	47.7	72.9	56.4	7.45
Italy	52.2	30.8	21.5	38.8	7.56
Lithuania	39.4	55.7	40.7	36.3	15.19
Norway (2015)	91.3	68.1	73.0	84.9	5.97
Poland	49.7	58.6	41.6	56.4	10.71
Portugal	72.0	31.8	41.2	44.8	9.88
Romania (2013)	31.1	50.9	79.4	49.0	9.59
Spain (2013)	60.8	53.8	48.9	62.1	9.25
Sweden	63.1	38.3	61.1	61.7	7.3
United Kingdom (2015)	61.7	52.0	26.1	63.6	10.66

* On the basis of adjusted annual consumption, population 18–64

** population 15+ (Source: European HfA Data Base: http://www.euro.who.int/en/data-and-evidence/databases/european-health-for-all-database-hfa-db)

It can be assumed, therefore, that the level of under-representation of various beverages may differ across the participating countries, which may produce a biased picture, in particular in the detailed description of drinking patterns. It could particularly affect results of the survey in Bulgaria that had very high coverage rate and one of the highest levels of recorded consumption and which seemed to be an outlier as regards high frequencies of drinking. On the other hand, results in the French survey may have underestimated its frequency and volume of drinking as the French survey offered the lowest coverage rate compared to the remaining surveys.

References

Alanko T. (1984) An Overview of Techniques and Problems in the Measurement of Alcohol Consumption in: Reginald G. Smart, Howard D. Cappell, Frederick B. Glaser, Yedy Israel, Harold Kalant, Robert E. Popham, Wolfgang Schmidt, Edward M. Sellers (ed.) Research Advances in Alcohol and Drug Problems, Tom 8. Plenum Press, New York and London. 209–226.

Bloomfield, K., Hope, A., Kraus L. (2013) Alcohol survey measures for Europe: A literature review. *Drugs: Education, Prevention and Policy*, 20,5, 348–360.

Thickett A., Elekes Z., Allaste A., Kaha K., Moskalewicz J., Kobin M., Thom B. (2013): The meaning and use of drinking terms: contrasts and commonalities across four European countries. Drug. Educ. Prev. Polic., 20,5, 375–382.

Mäkelä, Pl., Gmel, G., Grittner, U., Kuendig, H., Kuntsche, S., Bloomflied, K. & Room, R. (2006) Drinking patterns and their gender differences in Europe. Alcohol & Alcoholism, 41 (S1), i8–i18.

Montonen M., Makela P., Scafato E. & Gandin C. (eds) (2016) Good practice principles for low risk drinking guidelines. Helsinki, THL.

Moskalewicz J., Sierosławski J. (2010) Drinking population survey – guidance document for standardized approach. Institute of Psychiatry and Neurology, Warsaw.

Rehm J, Room R, Monteiro MG, et al. Alcohol use. In: Ezzati M, Lopez AD, Rodgers A, Murray CJL, (Editors) Comparative Quantification of Health Risks. Global and Regional Burden of Disease Attributable to Selected Major Risk Factors. Vol. 1. Geneva: World Health Organization (WHO); 2004. 959–1108.

Sierosławski J. (2011) Estimating annual alcohol consumption and analysis of drinking pattern. In: J. Moskalewicz (ed.) Pilot Drinking Survey Report, Warsaw, Institute of Psychiatry and Neurology. http://www.alcsmart.ipin.edu.pl/files/smart_pilot_final_report.pdf, 16–34.

Sierosławski J., Foster J., Moskalewicz J. (2013) Survey of European drinking surveys. Alcohol survey experiences of 22 European countries. *Drugs: Education, Prevention, and Policy*, 2013, Vol. 20, No. 5: 383–398.

WHO. International Guide for Monitoring Alcohol Consumption and Related Harm. Geneva: WHO; 2000.

Annex 2. Methods of data analysis

BSQF

Three and in some countries four or even five types of alcoholic beverages were used to estimate alcohol consumption and to explore drinking patterns.

The definitions of types of alcoholic beverages used in the BSQF were as follows:

- Beer: includes all types of beer, but does not include low (less than 2%) alcohol content or alcohol free beers.
- Wine: includes also champagne, sekt, prosecco, porto, sherry, vermouths, etc.
- Spirits: includes whisky, brandy, vodka, gin, palinka, liquors, shot drinks, other local specialities (more than 30% alcohol). In the case of cocktails, their alcohol component only was reported.
- In some countries additional one or even two country-specific alcoholic beverages were included such as: e.g. fruit wine, cider or alco-pops.

Considering the pros and cons of different time frames, we used 'the last 12 months' as it provides a more comprehensive picture of alcohol consumption and offers an opportunity to study the relationships between consumption and associated problems which are not very likely to occur with sufficient frequency during the last 30 days (Dawson 2003).

Respondents reported drinking frequency in the past 12 months of each of the alcoholic beverages on a frequency scale ranging from "every day" to "once a year" with "never" as a last category. The scale of frequency used in these questions was common for all other questions asking about frequency of drinking behaviours. The frequency scale of drinking was recalculated into the number of drinking days using the middle points of ranges (e.g. x to y was used as z times per year). The distribution of the number of drinking days is not continuous because it was created on the basis of a discreet frequency scale.

To reduce the confusion related to the concept of "average" we decided to ask about "usual" quantity drunk. In most countries, with the exception of Denmark and Norway, the usual quantity drunk per drinking day was asked about without providing answer alternatives, and the respondent could choose between different reporting units (e.g. 33 cl cans/bottles or 50cl cans/bottles), which had been predefined specifically by country, based on the most common glass or bottle or can used in that country. In Denmark and Norway, however, the concept of a standard drink was applied to report usual intake per drinking day instead, as it has become well integrated with their dinking cultures. The capping of extreme values was applied at the level of 50 cl of 100% alcohol: all values higher than 50 were set to 50 cl of 100% alcohol.

The question on overall or generic frequency of drinking was intended to capture drinking of any alcoholic beverage; that means beer, wine, spirits, or any other alcoholic beverage even in small amounts. This question was asked at the end of the BSQF section to avoid a filter effect which could increase the estimated abstinence rate (Sierosławski, Foster, Moskalewicz 2013) . The answers to this question were not used for calculation of alcohol consumption according to the BSQF method.

The algorithm of calculation of core variables related to annual alcohol consumption was as follows:

To derive the beverage-specific usual quantity of alcohol drunk in centilitres of 100% alcohol, the number of units of each alcoholic beverage the respondent reported usually drinking was first multiplied by a predefined volume of a unit (e.g. 33 cl or 50 cl; separately for each beverage). The result of this calculation was then multiplied by alcohol content (in per cent) of the beverage (separately for each beverage). To derive beverage-specific annual consumption, in cl of 100% alcohol, the number of drinking days of a given beverage was multiplied by the usual quantity in cl of 100% alcohol. To estimate total average annual alcohol consumption across beverages, the annual consumptions of each alcoholic beverage in centilitres of 100% alcohol were summed. If data on consumption of a particular alcoholic beverage were missing, the estimation was done on the basis of available data. That means the missing data were set to zero to save missing data on overall alcohol consumption. Only in the case of respondents who were not able to provide information on drinking any alcoholic beverage and were not abstainers was the data on alcohol consumption considered missing. For instance, if a respondent reported frequency and quantity of beer and wine, but was not able to estimate quantity or frequency of spirits drinking, his consumption was estimated on the basis of two beverages only.

The extreme values (above 182.5 litres of 100% alcohol) were capped. All values higher than 182.5 were set to 182.5 cl of 100% alcohol. A threshold for capping annual consumption was established by multiplying the daily cap threshold (50 centilitres of 100% alcohol) by 365 days.

Risky Single Occasion Drinking (RSOD)

In our study Risky Single Occasion Drinking (RSOD) is defined as consumption of at least 60 grams of 100% alcohol by males on one occasion and at least 40 grams of 100% alcohol by females. These volumes for an average human being may cause intoxication expressed as 0.5‰ BAC. The threshold of 60/40 grams of pure alcohol on one occasion seems to be too low to identify episodes of higher intoxication e.g. BAC over 1%.To explore the more extreme end of the distribution of volume consumed on one occasion, a question about frequency of drinking 120+ grams of pure alcohol for males and 80+ grams of pure alcohol for females was also applied.

The frequency of RSOD was investigated using a standard frequency scale used throughout all questions on frequency of alcohol consumption.

Additionally the question on maximum number of standard drinks on one occasion in the last 12 months was applied to get a reference point for the calculation of volume of alcohol attributed to RSOD. The capping procedure was used, and values higher than 400 were set to 400 grams of pure alcohol.

The volume of alcohol attributed to RSOD was calculated as follows:

The frequency of consuming at least 60 grams of 100% alcohol for males on one occasion and at least 40 grams of 100% alcohol for females was converted into the number of drinking days in the same way as frequency of drinking described earlier; that means using middle points of ranges as an estimate. The 40, 60, 80 and 120 grams of pure alcohol were converted into centilitres of pure alcohol.

Firstly the part of the volume of alcohol attributed to 60–120 /40–80 grams of pure alcohol was estimated. For respondents having at least 60/40 grams on one occasion but not having 80/120 grams on one occasion, the number of days with consumption of at least 60/40 grams was multiplied by the value of the midpoint between 60/40 grams and maximal intake on one occasion. For respondents having 80/120 grams of pure alcohol on one occasion the number of days with consumption of at least 60/40 grams minus number of days with consumption of at least 120/80 was multiplied by 90/60 grams which was a midpoint between these two thresholds.

Secondly the part of the volume of alcohol attributed to 120/80+ grams of pure alcohol was estimated by multiplying the number of days with consumption of at least 120/80 grams by the midpoint between 120/80 grams and maximum intake on one occasion. Finally these two parts were summed up to get the volume of alcohol attributed to any RSOD drinking.

Overall alcohol consumption

To estimate overall alcohol consumption we combine data on usual drinking (BSQF) and binge drinking (RSOD) in the following way:

Two groups of respondents were distinguished. The first group is composed of people whose average usual consumption (BSQF) per drinking day was equal to or higher than their average binge (RSOD) consumption per binge drinking day. For them, no adjustment to BSQF volume is needed, as binge drinking is the 'typical consumption'. For them, overall annual alcohol consumption was calculated just on the basis of their BSQF consumption. They constitute roughly 50% of all drinkers.

The second group includes the remaining consumers. For them, the reported usual quantity of alcohol drunk under-estimates the arithmetic mean of quantities drunk on various drinking occasions. Therefore for them, a better estimate is obtained by adding the consumption on binge drinking occasions that is in excess of the typical consumption. The latter was re-calculated as a product of a number of RSOD days per year multiplied by the difference between binge (RSOD) consumption per binge drinking day and usual (BSQF) consumption per usual drinking day.

Subjective drunkenness

The question on drunkenness was as follows: "How often in the past 12 months did you drink enough to feel unsteady on your feet or so your speech was slurred?". The word drunkenness was not used in the formulation of the question taking into account its cultural sensitivity at least in some countries as well as translation challenges.

For analytical purposes, frequency of drunkenness was explored using a standard frequency scale converted into the number of days when drunkenness was reported.

The question about volume of alcohol usually needed to be drunk was answered by providing the number of country specific units approximately equal to 10 grams of pure alcohol. The results were recalculated into grams of pure alcohol.

A3.4 Context of usual drinking vs RSOD

Katarzyna Okulicz-Kozaryn, Marta Zin-Sędek, Geir Scott Brunborg

For most people, drinking alcohol is a social activity. It typically occurs in the company of other people, such as family, friends or work colleagues. Drinking alone is more rare, and may be perceived as a risk factor for alcohol-related problems (Bourgault, Demers, 1997; Social and Cultural Aspects of Drinking, 1998; Tucker et al., 2006). Drinking in social situations takes place either in specific, designated environments for communal drinking (such as pubs, bars, etc.); other public places (e.g. parks, streets, beaches) or in private settings (home). The drinking context may be different for the same individual depending on, for instance, day of the week, time of day, and whether or not there is a special event, but each individual will have fairly regular patterns of where and with whom they drink alcohol. The total of such individual drinking patterns make up what may be called the drinking *culture* within a group of people, a state, or a part of the world (Savic, Room, Mugavin, Pennay & Livingston, 2016). The drinking culture can be different in different countries, and may help explain differences in alcohol related problems between countries. Several studies have reported associations between the usual context of drinking and the burden of alcohol use. Drinking with meals, especially in a company of a partner, has been shown to be less detrimental than drinking without meals (Rehm et al., 2003; Wells et al., 2008). On the other hand, drinking in public may be associated with higher risk for a drinker or others (i.e. of aggression or accidents) than drinking at home (Rehm et al., 2003; Wells et al., 2005; Freisthler et al., 2014).

Analysing cross-national differences in context of drinking is interesting for several reasons. First of all, cross-national differences reflect different attitudes towards alcohol in European countries. As suggested in the report to the European Commission (Social and Cultural Aspects of Drinking, 1998) "positive, integrated, non-temperance cultures tend to favour more 'open' drinking environments, while negative, ambivalent, temperance cultures are associated with 'closed', insular designs" (p. 11). Secondly, in addition to the volume of alcohol consumed, drinking patterns determine health and social costs of alcohol use across EU countries, being more detrimental in Eastern Europe than in the Western part of the continent (Rehm et al., 2003). Another reason for studying the context of drinking is that it can change over time because of changes in alcohol policy. For example, in the UK, private consumption of alcoholic drinks (mainly in private homes) has gained over more traditional drinking in pubs (Foster, 2008). This may increase the risk of problems emerging outside of controlled environments.

In this chapter, we compare European countries in terms of frequency of drinking with meals, frequency of drinking alcohol in different locations, and frequency of drinking in the company of various people.

Methods

In the RARHA SEAS survey two groups of questions concerning the context of drinking in the past 12 months were included. Firstly, respondents were asked how often they had consumed any amount of alcohol in given circumstances. The second group of questions concerned the context of episodic heavy drinking, i.e. how often they drank at least 40 grams (female) or 60 grams (male) on one occasion in the same circumstances. The answers scales were the same for both groups of questions and allowed selection between: "every day or almost daily (5–7 days per week)", "at least once a week (1–4 days per week)", "at least once a month (1–3 days per month)", "less frequently (1–11 days per year)" or "never in the past 12 months".

The figures below show the proportion of alcohol consumers who indicated taking part in an alcohol related activity (1) at least once per week during the last year, and (2) less frequently than once per week during the last year (3 days per month or less frequently). Frequencies of drinking in a given context by those who drink at least once a week are also presented on maps in order to facilitate comparisons.

As frequent alcohol consumers – those who drink once a week or more often – constitute a group at higher risk of developing alcohol related problems (comparing with occasional alcohol consumers or abstainers), their drinking situations are analysed separately. In this subgroup (of those who drink alcohol once a week or more frequently), the answers are presented in two categories, indicating (1) daily and (2) weekly drinking in a given context.

Questions on the general frequency of drinking with meals and in different places were asked in all but one (Austria) countries participating in the project. Questions on the general frequency of drinking in the company of family members, including respondent's partner, friends, colleagues, acquaintances, and drinking alone, were skipped in Austria and Finland. But the questions about the circumstances of risky single occasion drinking or heavy episodic drinking (at least 40 grams of 100% alcohol on one occasion for women and 60+ grams for men) were only included in a few countries: about the company in four countries (Bulgaria, Croatia, Poland, Spain[1]); about drinking with meals – in six countries (all mentioned above plus Finland); and about the location – in seven countries (all mentioned above plus France). Therefore, the context of heavy episodic drinking is presented separately at the end of this chapter. Frequencies of heavy episodic drinking at least once a week or less frequently in a given context are calculated in relation to the number of those who reported having at least one episode of heavy drinking in the past year.

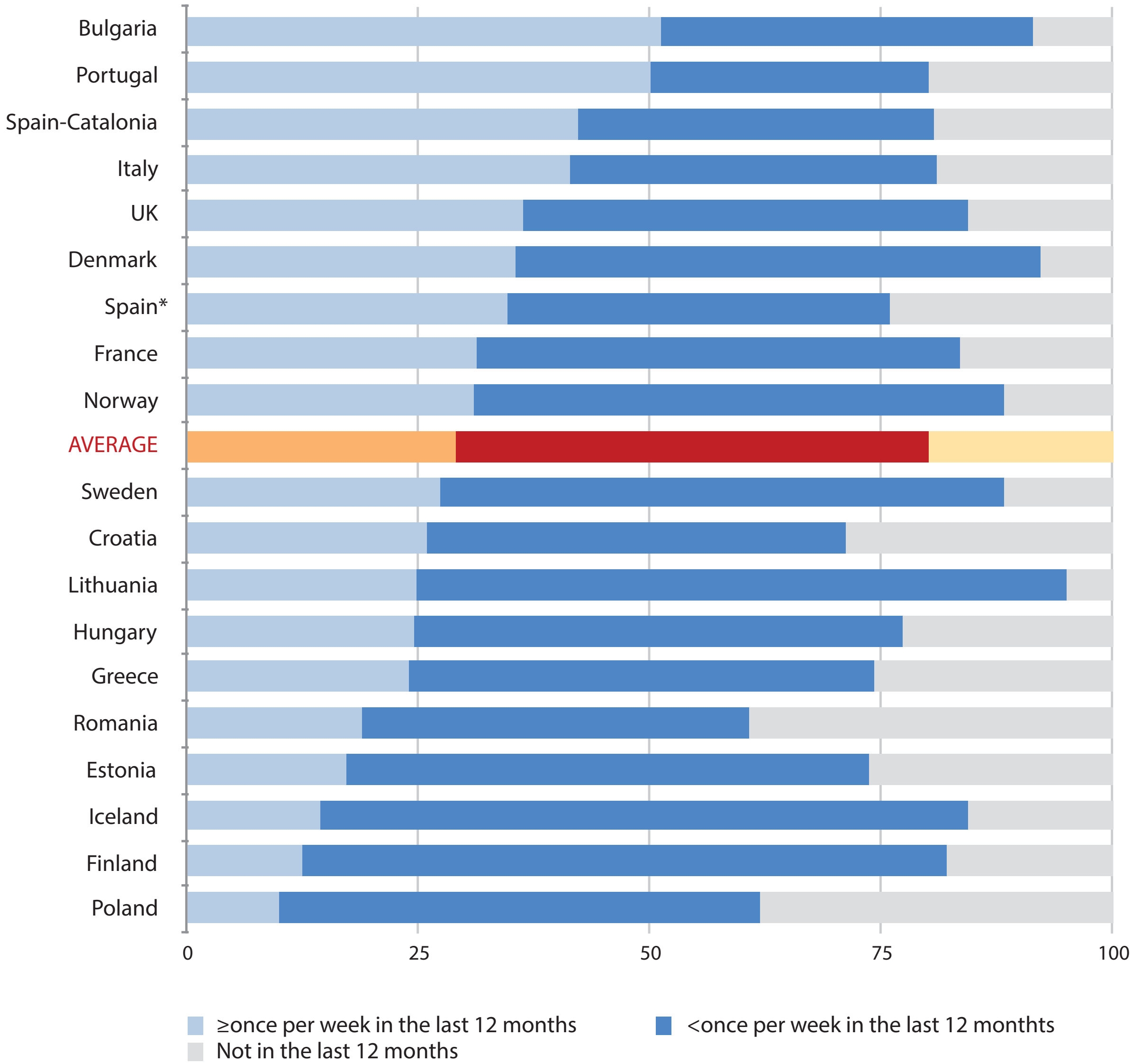
[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

Results

Drinking with a meal

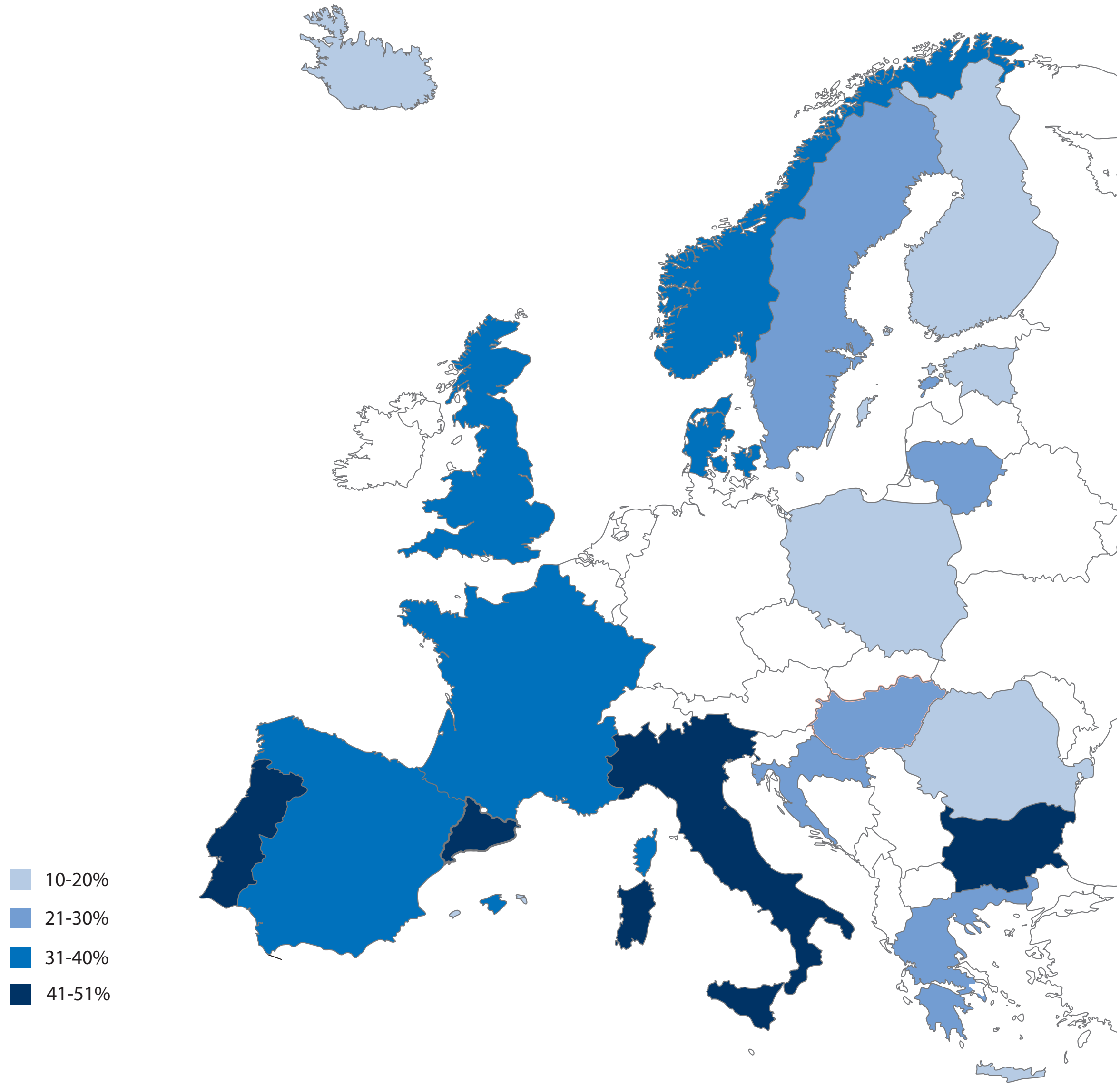
The proportion who reported drinking with a meal (Figure A3.4.1) ranges from 95% in Lithuania, where only 4.9% of drinkers have never drunk with meals in the past 12 months, to 60.9% in Romania. However, frequent drinking with a meal (i.e. daily or weekly) is rather rare in Lithuania (24.6% of alcohol consumers drink daily or weekly with a meal). The lowest rates of frequent drinking with a meal (Figures A3.4.1, A3.4.2) are observed in two Nordic (Finland 12.5%, Iceland 14.4%) and Baltic countries (Poland 9.9%, Estonia 17.2%), while frequent drinking with a meal is most prevalent in South Europe (Bulgaria 51.1%, Portugal 50.1%, Spain-Catalonia 42.1% and Italy 41.4%).

Figure A3.4.1. Proportion of drinkers (%) that consumed alcohol with a meal at least once a week, more rarely than once a week, or never in the last 12 months



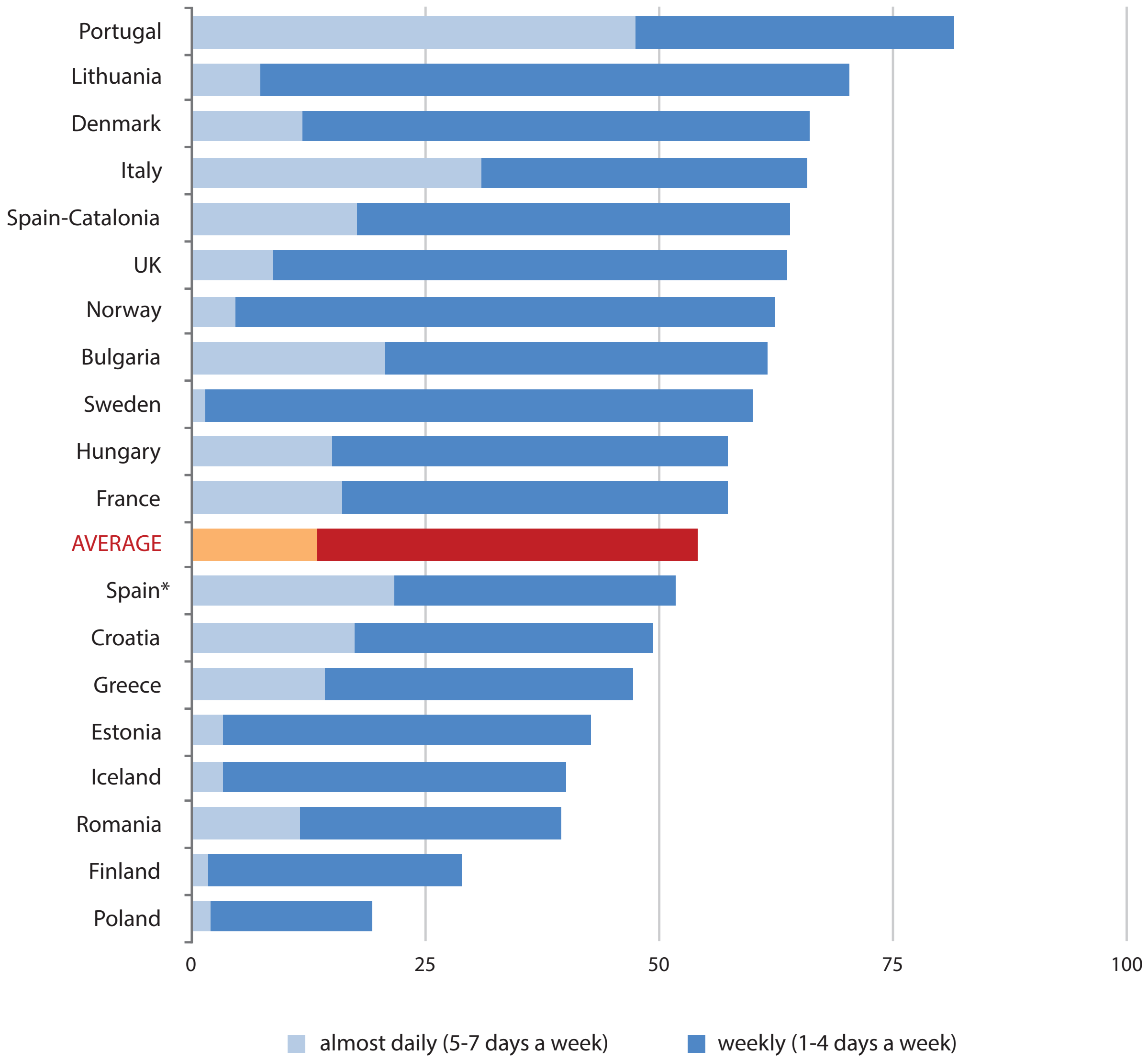
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.4.2. Prevalence of frequent (at least weekly) drinking with a meal among all alcohol consumers



Among those who drink alcohol frequently (at least weekly), the highest frequency of drinking with a meal (Figure A3.4.3) is observed in Portugal (81.5% including 47.6% of those, who drink with a meal on a daily basis) and Lithuania (70.3%) followed by Denmark, UK, Italy and Spain-Catalonia. Drinking with a meal is rather uncommon among frequent alcohol consumers in Poland (less than 20% drink with a meal at least weekly), Finland (<30%), Romania and Iceland (<40%).

Figure A3.4.3. Prevalence of daily and weekly drinking with a meal among frequent alcohol consumers (drinking once a week or more often)



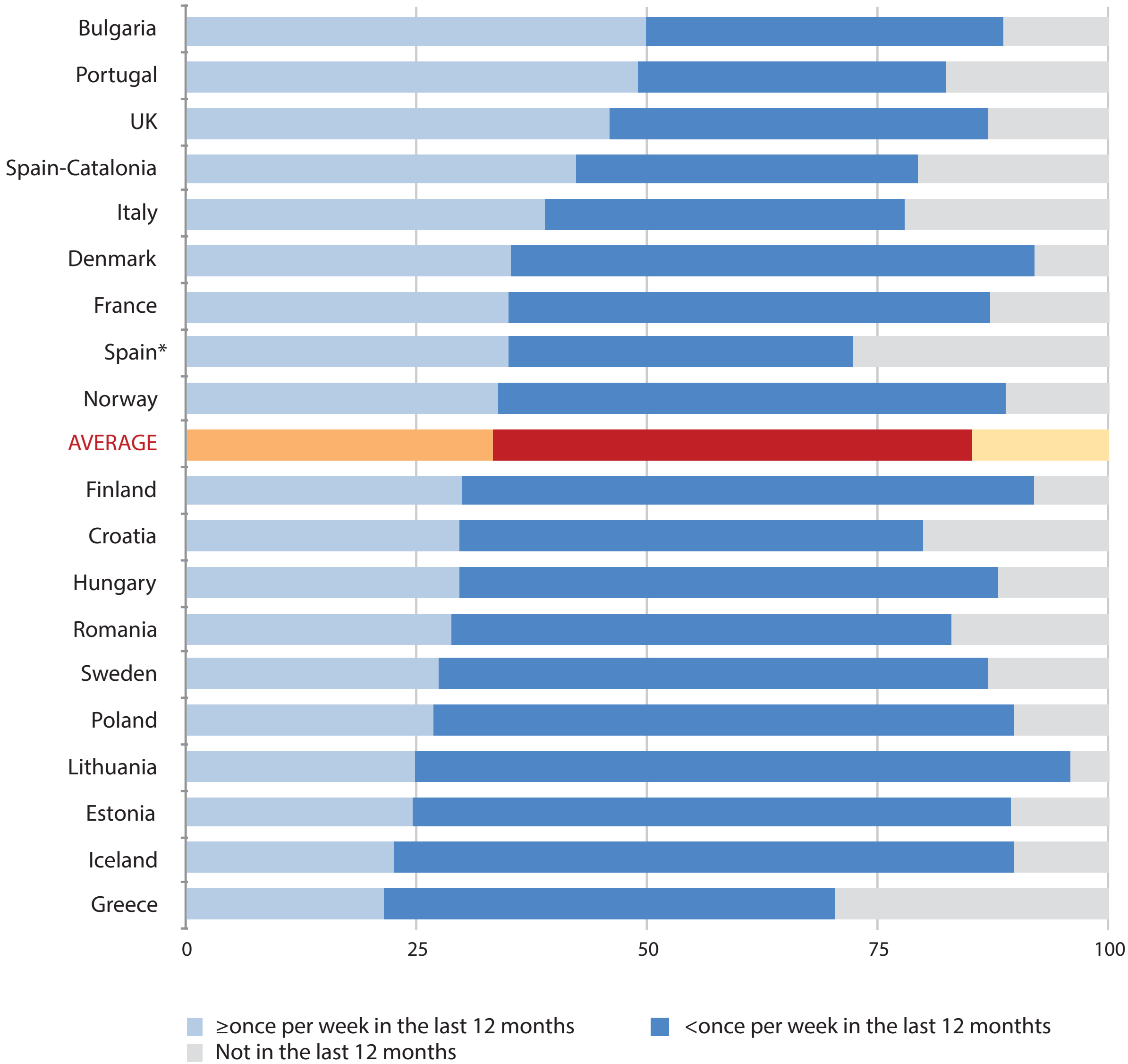
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Drinking at home

In all European countries, drinking at the respondent's home (Figure A3.4.4) is even more prevalent than drinking with a meal, with the lowest rates above 70% (in Greece and Spain). Drinking at home, at least occasionally, is especially prevalent in Lithuania (only 4.2% of drinkers never drink at home), Denmark (8%) and Finland (8.1%).

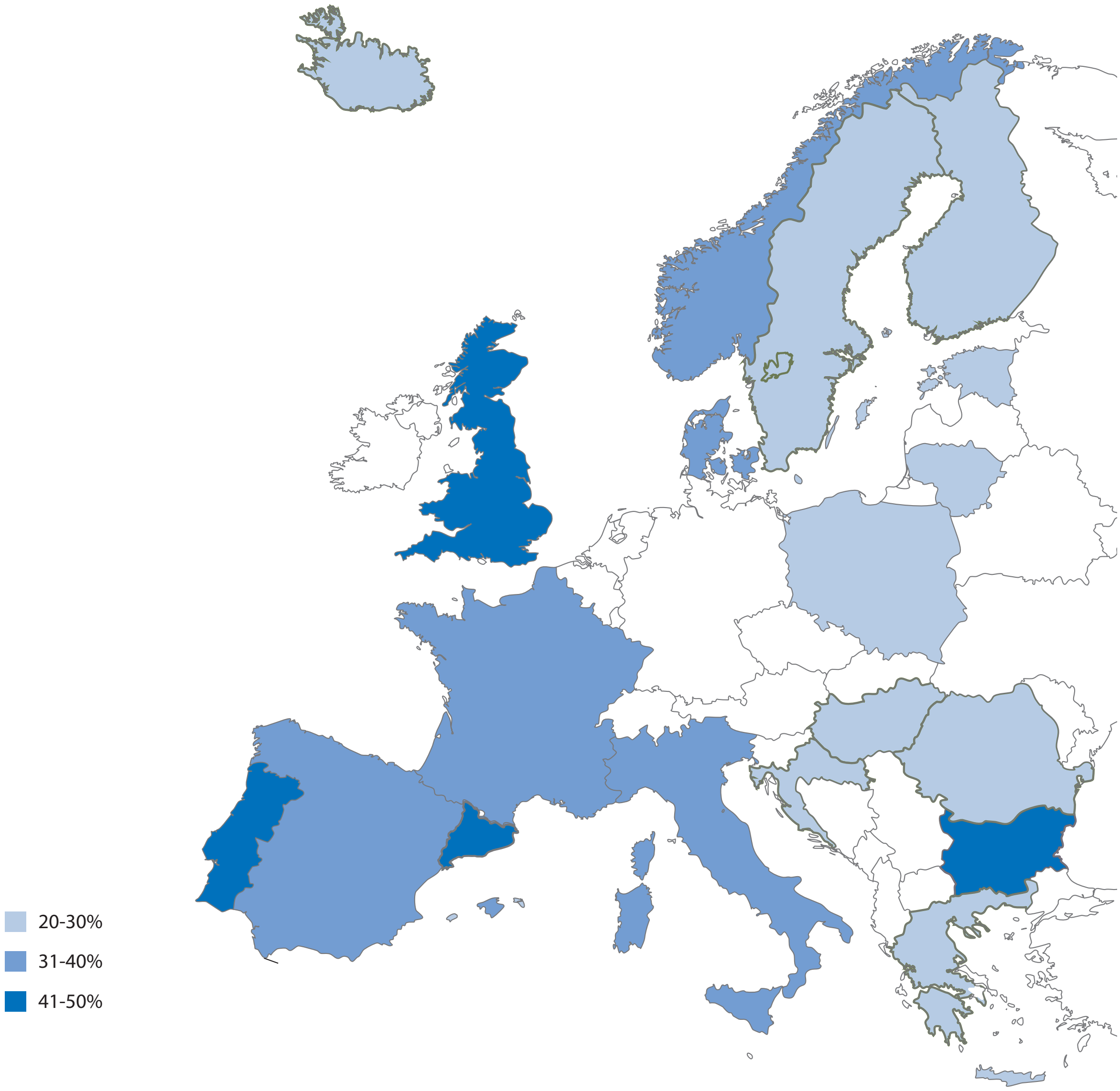
Among all alcohol consumers, the lowest rates of frequent drinking in the respondent's home (Figures A3.4.4, A3.4.5) are observed in Greece (21.3% of alcohol consumers drink daily or weekly at home). Frequent drinking at home is rather rare in Northern Europe (Iceland 22.4%, Estonia 24.5%, Finland 29.9%,), and the central European countries (Poland 26.6%, Romania 28.8%, Hungary 29.5%). The highest rates of those who frequently drink at home are in Bulgaria 49.8%, Portugal 48.8%, the UK 45.9% and Spain-Catalonia 42.1%).

Figure A3.4.4. Proportion of drinkers (%) that consumed alcohol at home at least once a week, more rarely than once a week, or never in the last 12 months



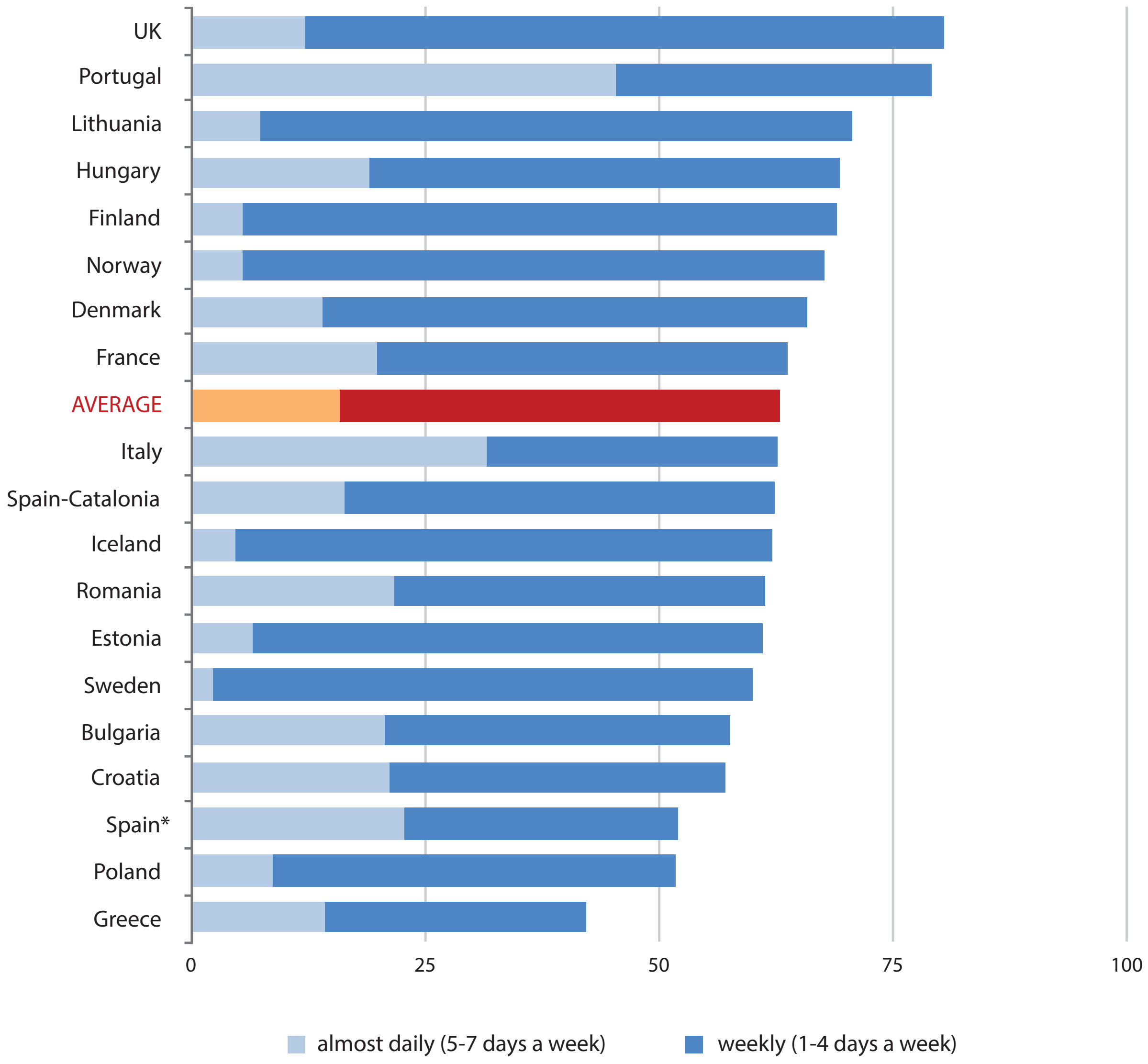
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.4.5. Prevalence of frequent (at least weekly) drinking at home among all alcohol consumers



Among those who drink alcohol frequently (at least weekly), the highest prevalence of drinking at home (above 70%) is observed in UK, Portugal and Lithuania (Figure A3.4.6). However, daily drinking at home is much more prevalent in Portugal (45.4%) than in UK (12.2%) or Lithuania (7.4%). In general, in the subgroup of frequent alcohol consumers, drinking at home is less common in the south of Europe (Greece, Spain, Italy, Croatia, Portugal, Romania) than in the north (Lithuania, Denmark, Finland, Poland, Iceland, Estonia, Norway).

Figure A3.4.6. Prevalence of daily and weekly drinking at home among frequent alcohol consumers (drinking once a week or more often)



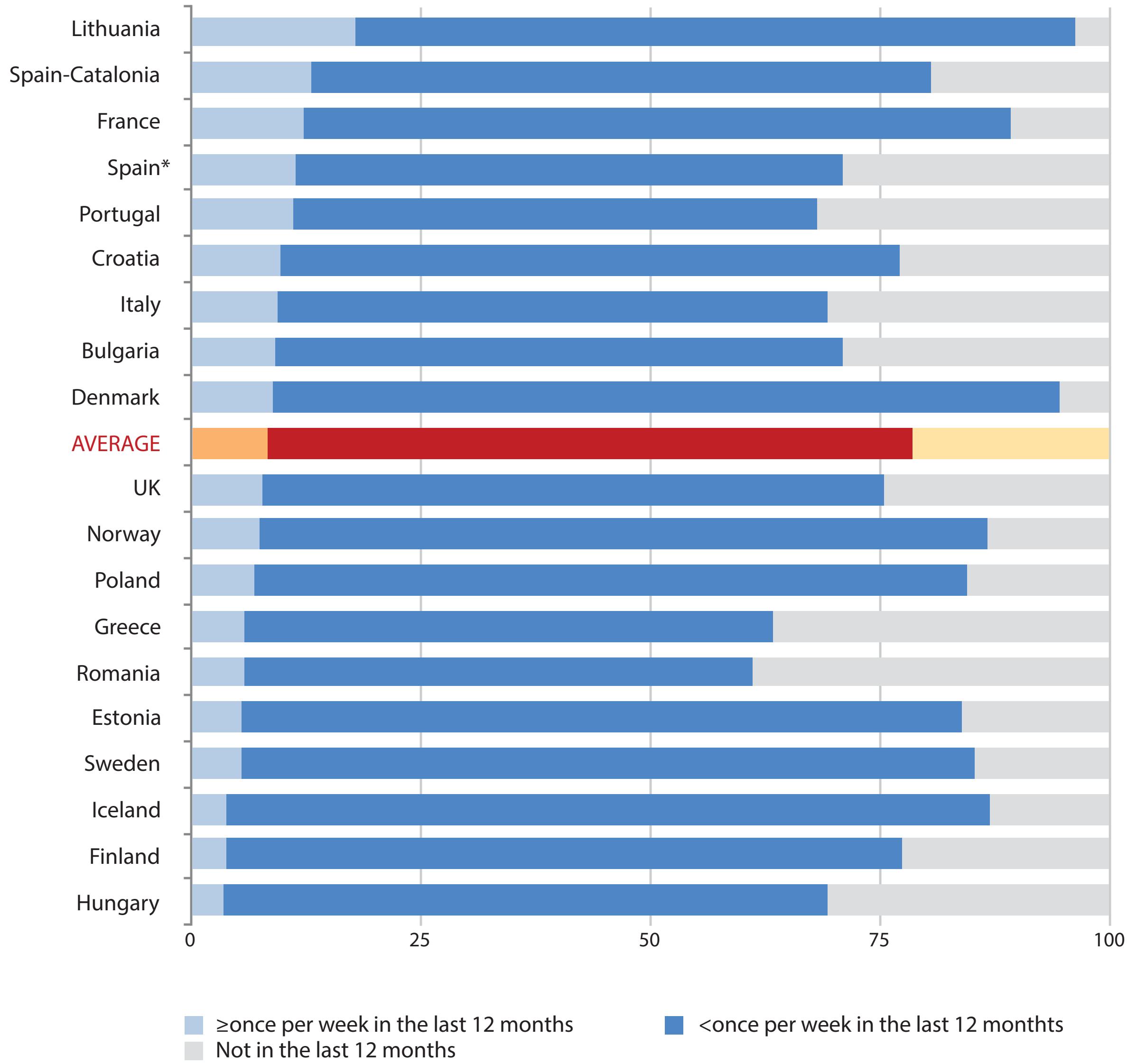
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Drinking in somebody else's home

Somebody else's home is a very popular drinking place, too (Figure A3.4.7). About 95% of respondents in Lithuania and Denmark have drunk in such a place at least occasionally in the past 12 months. The lowest rates of those who have ever drunk in somebody else's home are in Romania and Greece (61.3% and 63.3% respectively), followed by other countries from the south of Europe (Portugal, Italy, Bulgaria and Hungary).

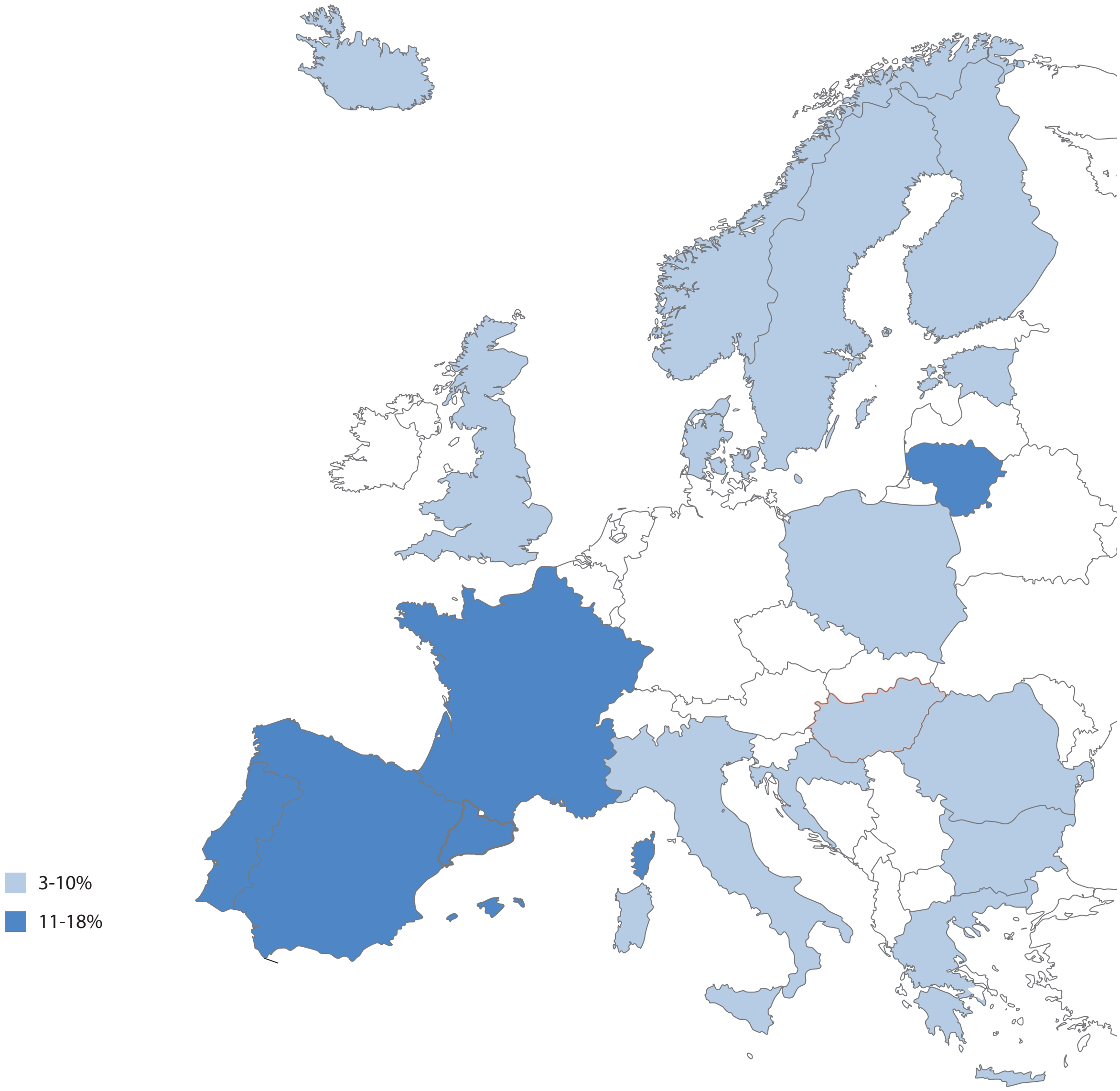
In all 20 surveys the prevalence of weekly drinking at somebody else's home (Figures A3.4.7, A3.4.8) is low – in most countries below 10%. The lowest rates of frequent (at least weekly) drinking in somebody else's home are observed in Hungary (3.6%), Iceland (3.9%), Finland (3.8%), Sweden (5.5%) and Estonia (5.6%), followed by Greece (5.9%) and Romania (5.8%). Frequent drinking at somebody else's home is most prevalent in Lithuania (18%), followed by Spain-Catalonia (13.1%), France (12.4%) and Spain (11.4%).

Figure A3.4.7. Proportion of drinkers (%) that consumed alcohol in somebody else's home at least once a week, more rarely than once a week, or never in the last 12 months



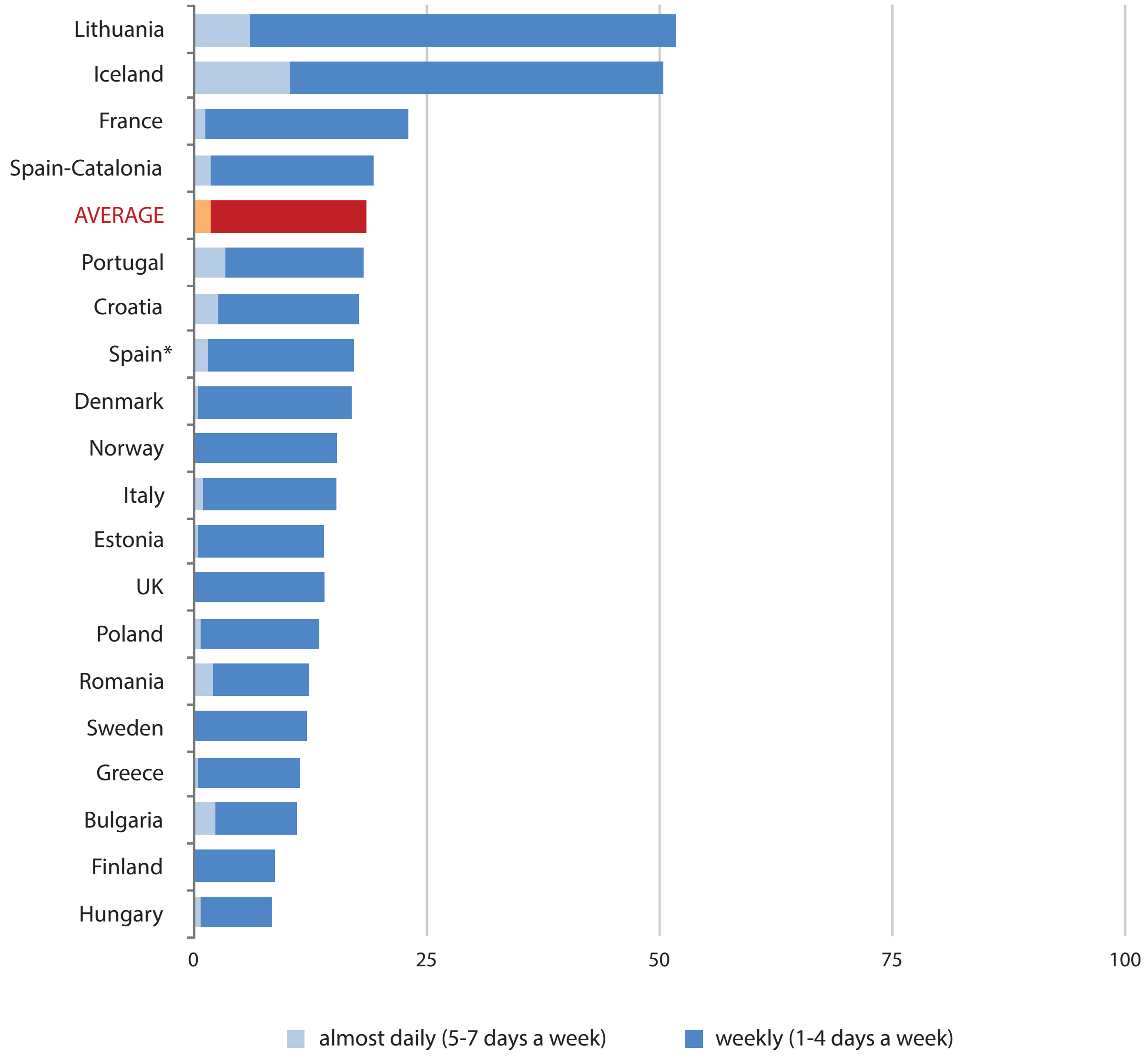
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.4.8. Prevalence of frequent (at least weekly) drinking in somebody else's home among all alcohol consumers



Among those who drink alcohol frequently (at least weekly), the highest prevalence of drinking at somebody else's home (Figure A3.4.9) is observed in Lithuania (51.7% including 6% of those who drink at somebody else's home on a daily basis) and Iceland (50.4%). In all other countries, the rate of frequent drinkers who frequently drink at somebody else's home is much lower (below 25%).

Figure A3.4.9. Prevalence of daily and weekly drinking in somebody else's home among frequent alcohol consumers (drinking once a week or more often)



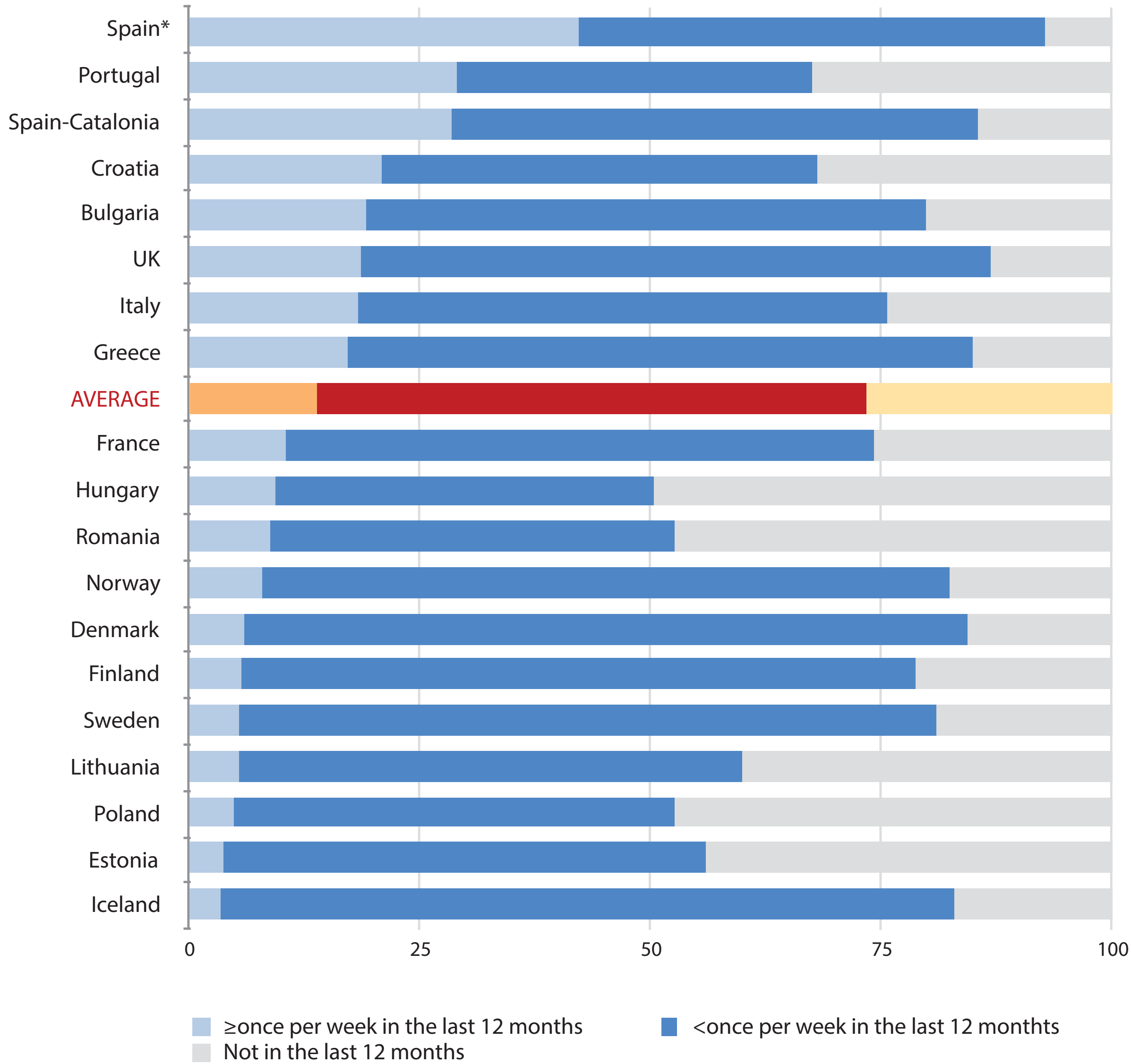
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Drinking in a pub, bar, club, restaurant

Drinking in a pub or other on-premise setting (Figure A3.4.10) is reported less frequently than drinking in the respondent's or somebody else's home. Only in Spain is the prevalence rate higher than 90%, and it exceeds 85% in just two other sites (UK and Spain-Catalonia). The popularity of drinking in public places is the lowest in the former socialist economies countries: Hungary, Romania, Poland, Estonia and Lithuania (prevalence rates in these countries range from 50% to 60% of those who, at least occasionally, have consumed on-premise alcohol).

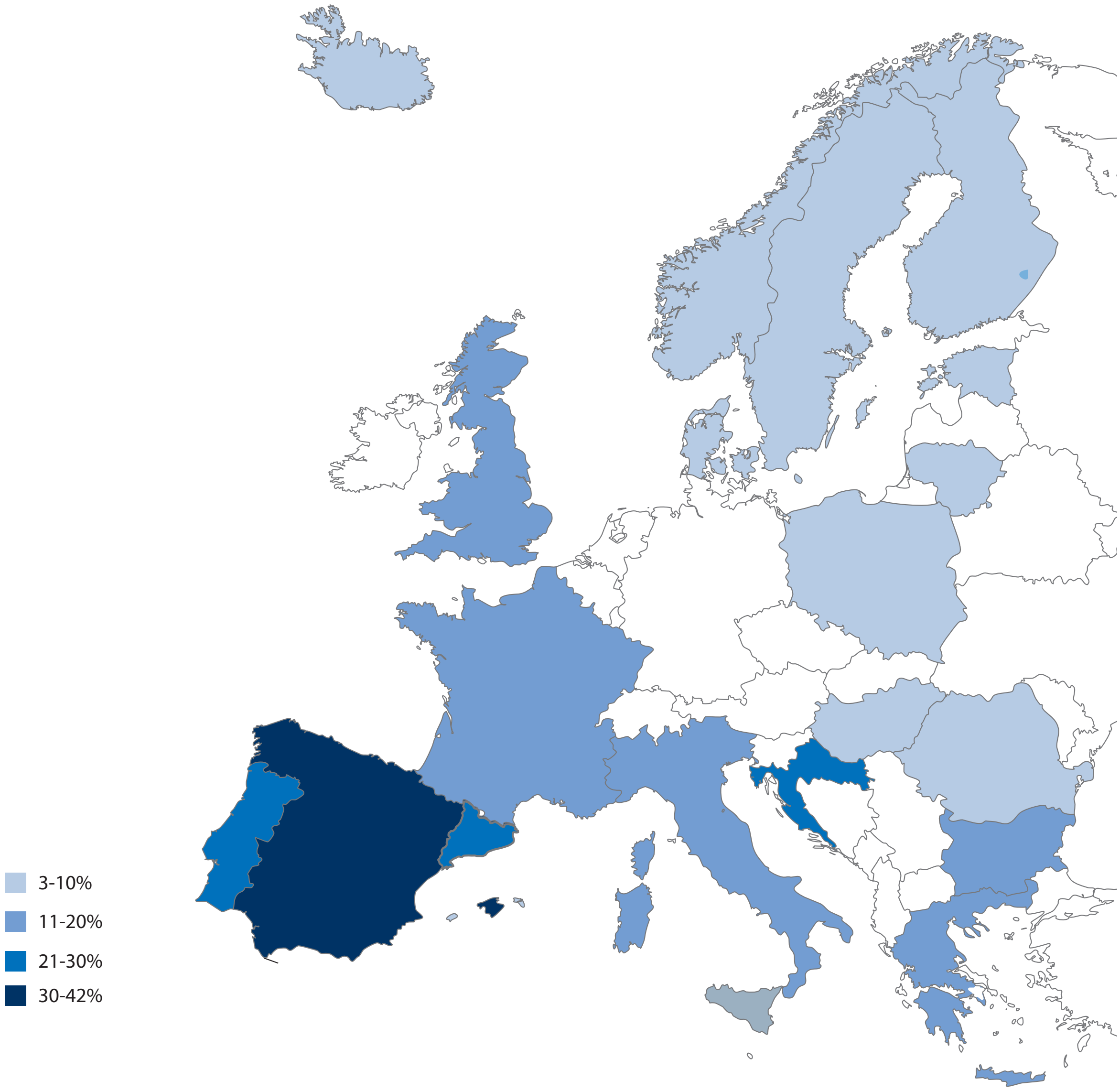
The prevalence of daily or weekly drinking in pubs, bars or restaurants, etc. (Figures A3.4.10, A3.4.11) is the lowest (≤ 5%) in Iceland, Estonia and Poland, followed by other Baltic countries (Lithuania, Sweden, Finland and Denmark). The highest rates of frequent drinking in an on-premise context are observed in Spain (42.2%). Also high but significantly lower rates of those who drink alcohol on-premise are found in Portugal (28.9%) and in Spain-Catalonia (28.5%).

Figure A3.4.10. Proportion of drinkers (%) that consumed alcohol in a pub, bar, club, restaurant at least once a week, more rarely than once a week, or never in the last 12 months



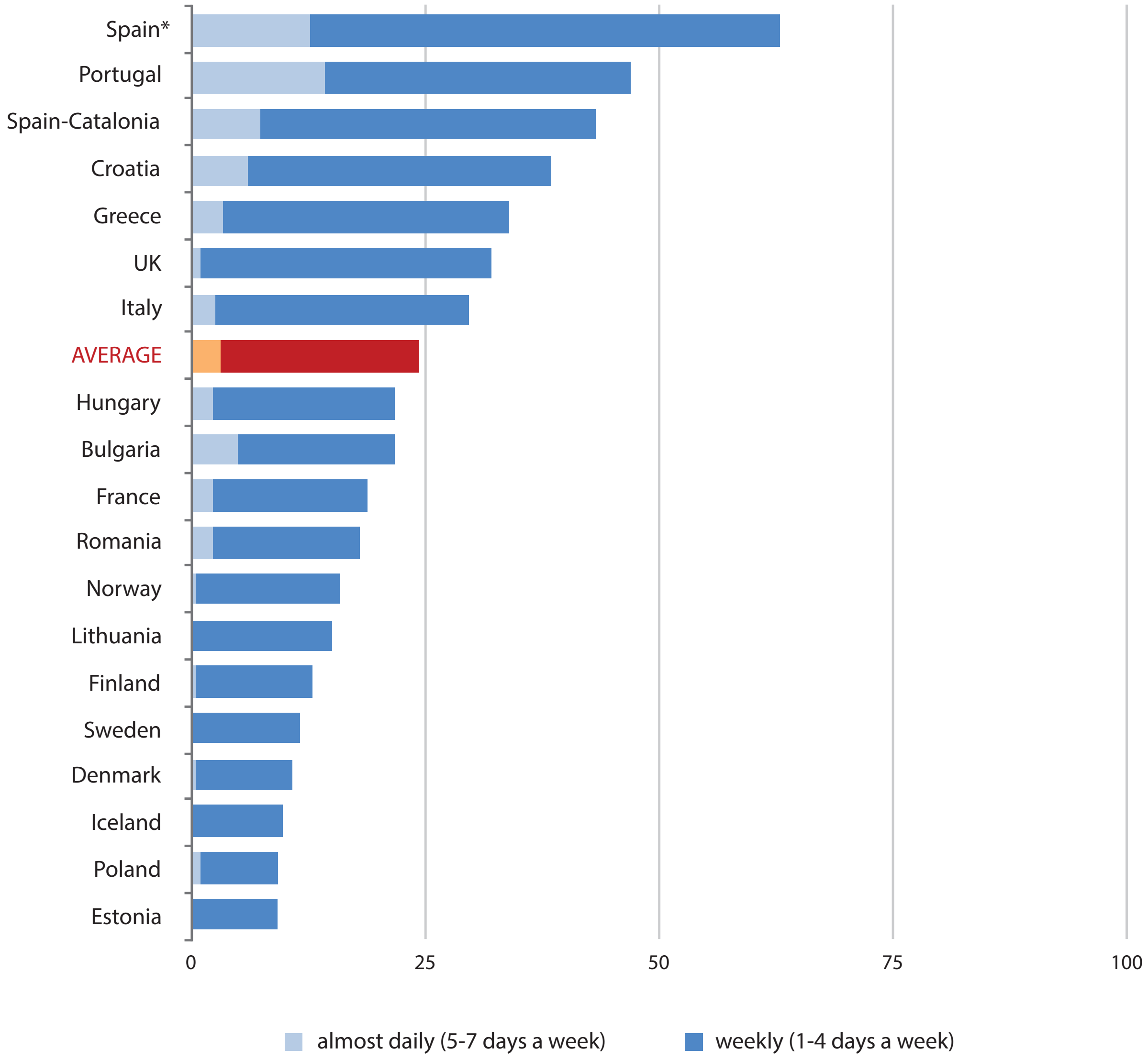
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.4.11. Prevalence of frequent (at least weekly) drinking in a pub, bar, club, restaurant among all alcohol consumers



Also among those who drink alcohol frequently (at least weekly), the highest prevalence of frequent drinking in pubs, bars, clubs or restaurants, etc. (Figure A3.4.12) is observed in Spain, Spain-Catalonia and Portugal (above 40%), followed by Croatia, Greece and UK (above 30%). Frequent alcohol consumers especially rarely (less than 10%) drink on-premise in Poland, Estonia and Iceland.

Figure A3.4.12. Prevalence of daily and weekly drinking in a pub, bar, club, restaurant among frequent alcohol consumers (drinking once a week or more often)

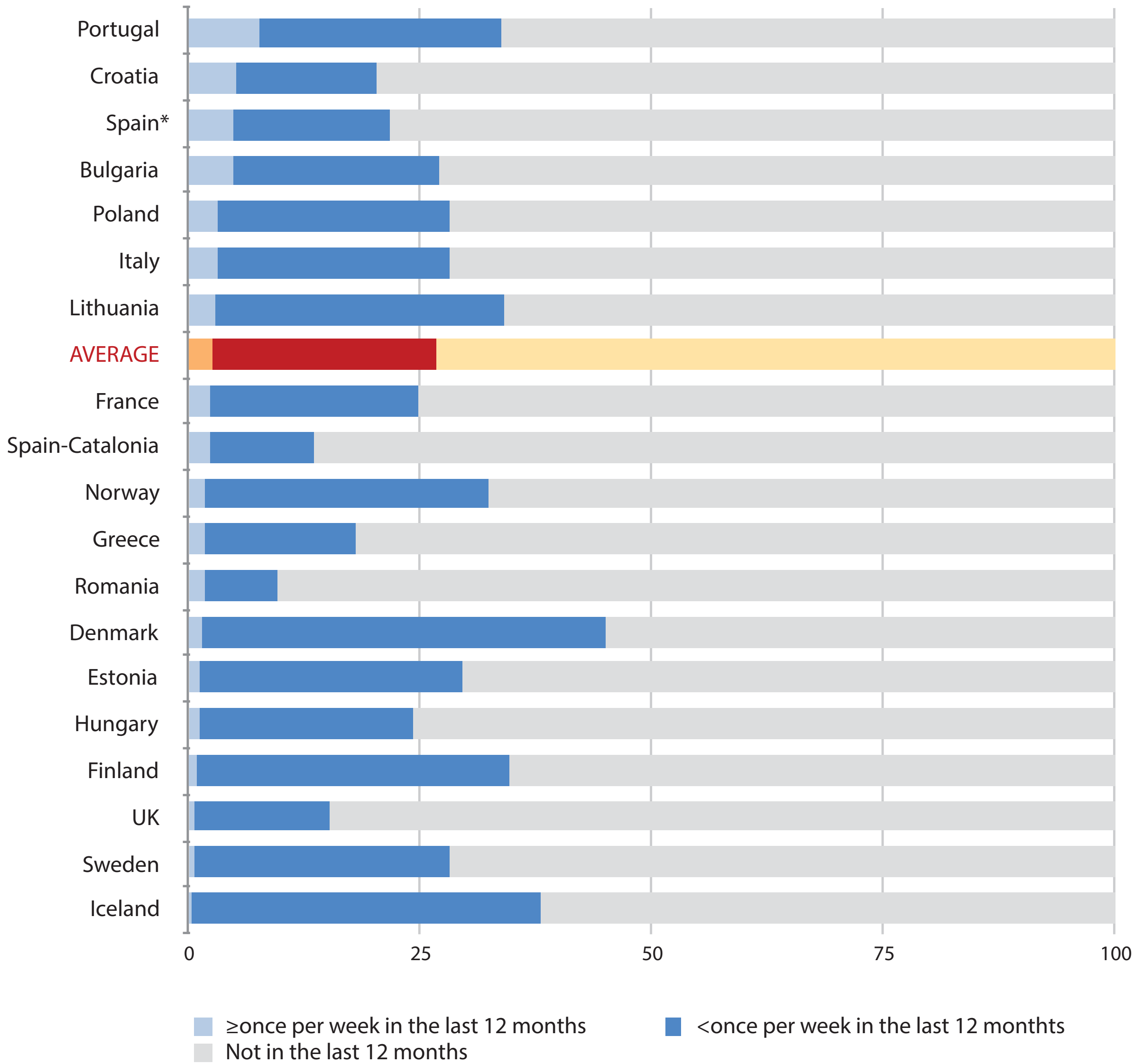


* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Drinking outdoors

Drinking outdoors, that means in parks or streets, etc., is in general very rare, with the highest prevalence in Denmark (45%) and the lowest in Romania (9%). Only in Southern Europe (Portugal, Spain, Croatia) are the rates of those who drink outdoors at least weekly above 5% of alcohol consumers (Figure A3.4.13). As the average prevalence of weekly drinking outdoors is very low (2.5%) and differences are generally small, these data are not presented on a map.

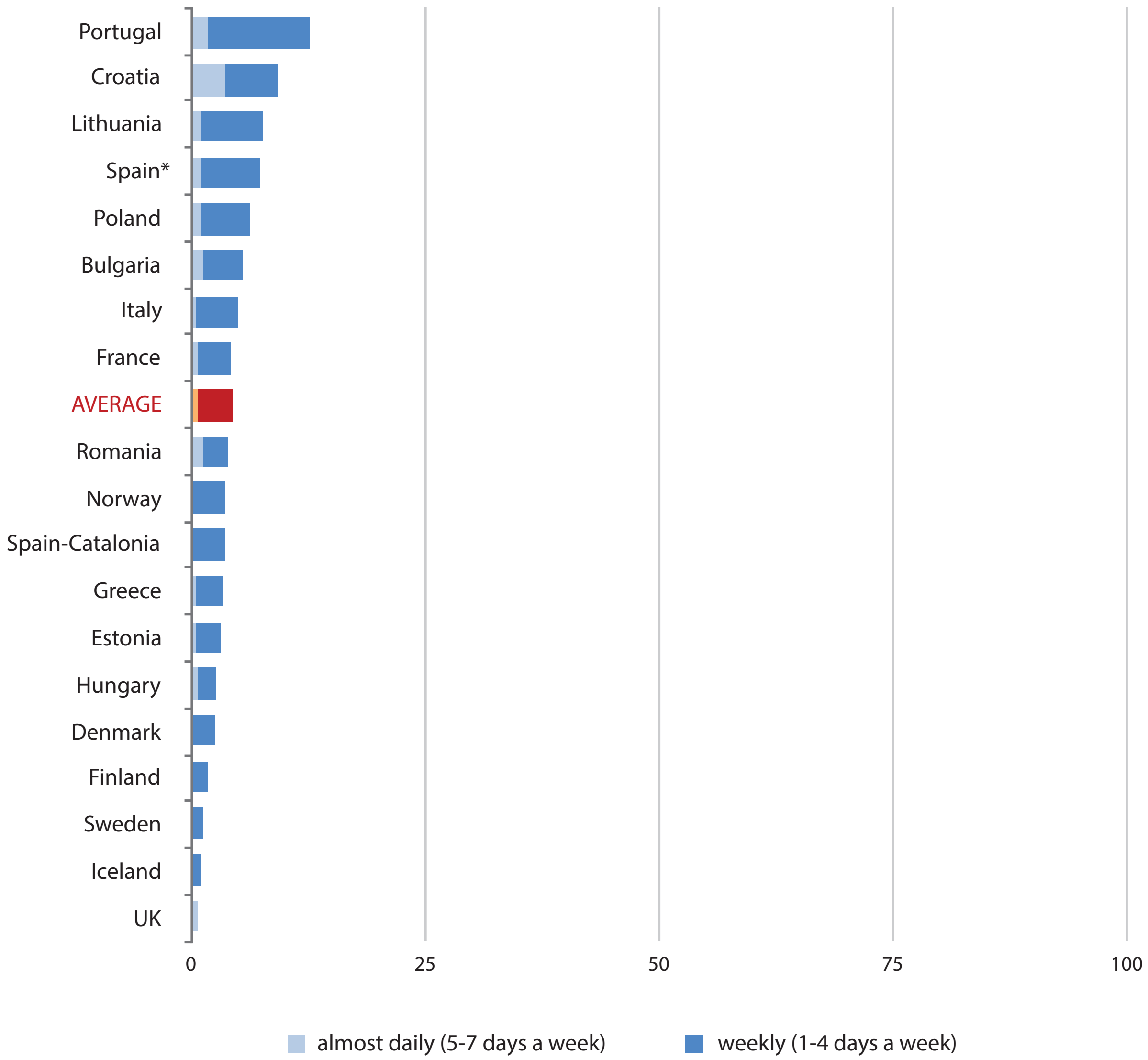
Figure A3.4.13. Proportion of drinkers (%) that consumed alcohol outdoors at least once a week, more rarely than once a week, or never in the last 12 months



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Among those who drink alcohol frequently (at least weekly), the highest (but still rather low – 12.7%) prevalence of frequent drinking outdoors (Figure A3.4.14) is observed in Portugal, followed by Spain (7.2%) and Croatia (9.1%) and two Baltic countries: Lithuania (7.7%) and Poland (6.3%).

Figure A3.4.14. Prevalence of daily and weekly drinking outdoors among frequent alcohol consumers (drinking once a week or more often)



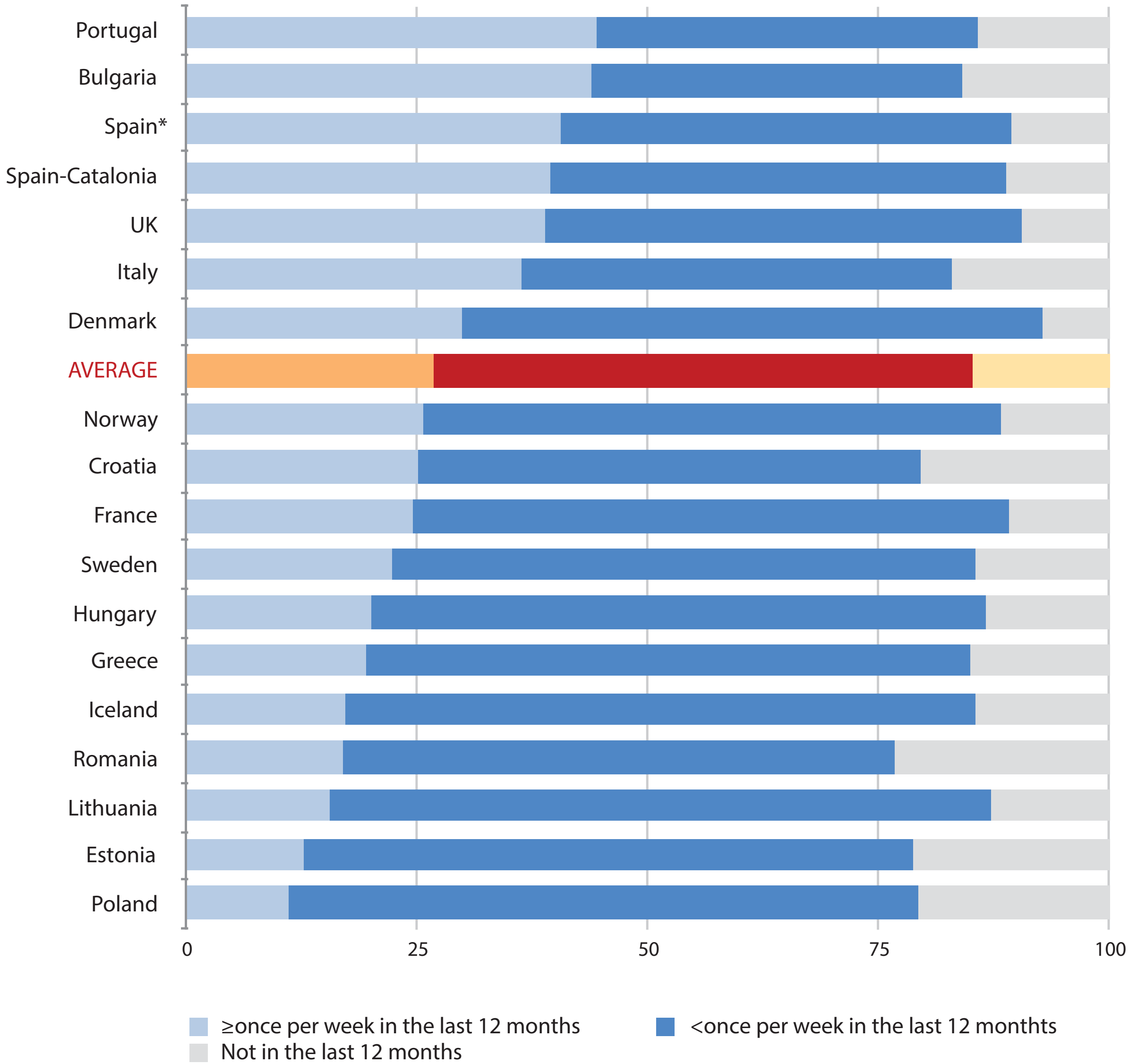
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Drinking with family members including respondent's partner

Drinking with a partner or family members is very popular in all 20 surveys (Figure A3.4.15). It ranges from 76.8% in Romania to 92.7% in Denmark, where only 7.3% of drinkers have never drunk within their family in the past 12 months.

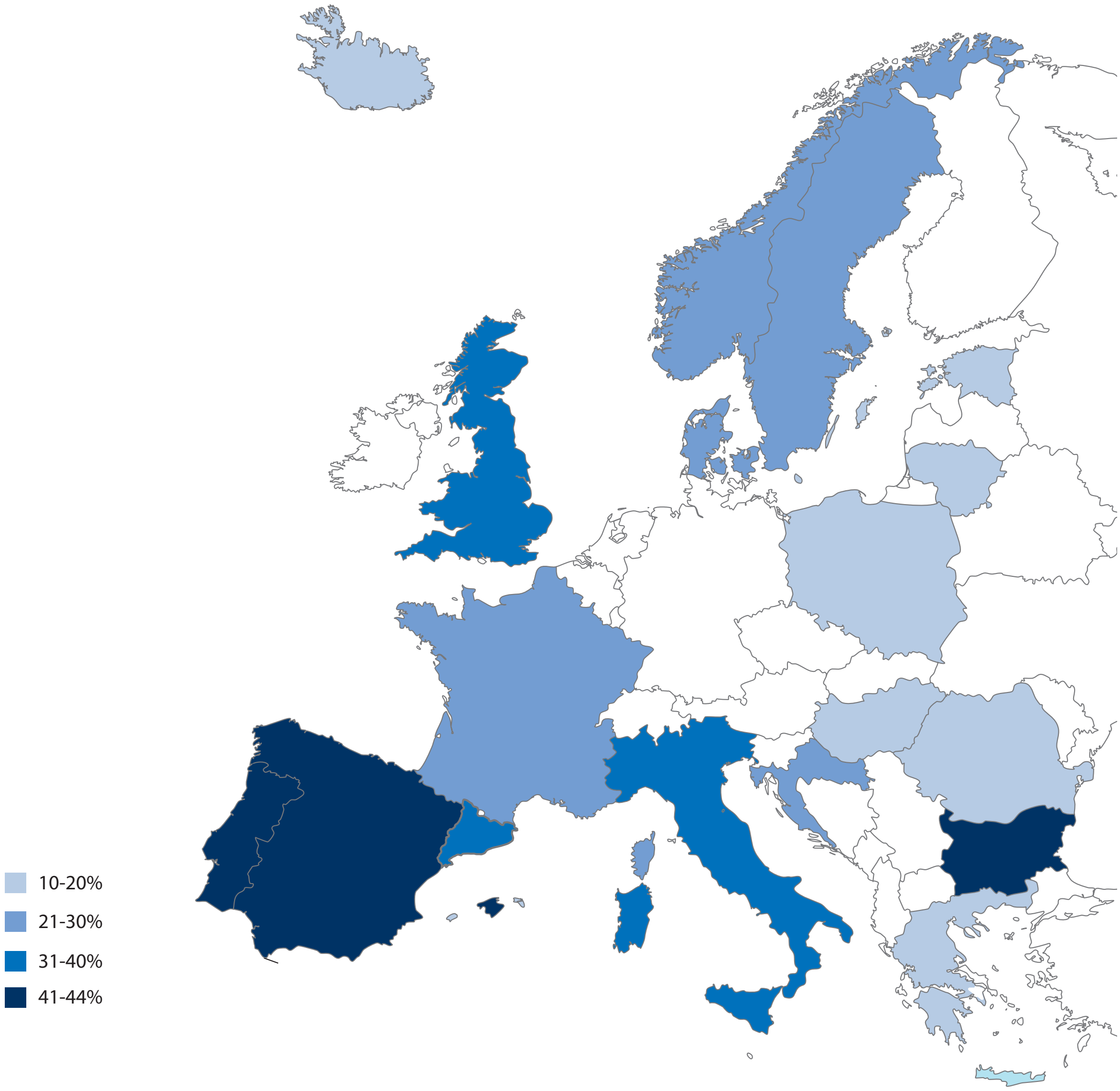
The lowest rates of frequent drinking with family members (Figures A3.4.15, A3.4.16) are observed in Poland (10.9% of alcohol consumers drink daily or weekly with family members including a partner), followed by other Baltic countries (Estonia 12.7%, Lithuania 15.5%). The highest rates of those who frequently drink within a family are in Portugal (44.4%) and Bulgaria (43.9%), followed by Spain (40.5%), Spain-Catalonia (39.4%) and UK (38.7%).

Figure A3.4.15. Proportion of drinkers (%) that consumed alcohol with family members at least once a week, more rarely than once a week, or never in the last 12 months



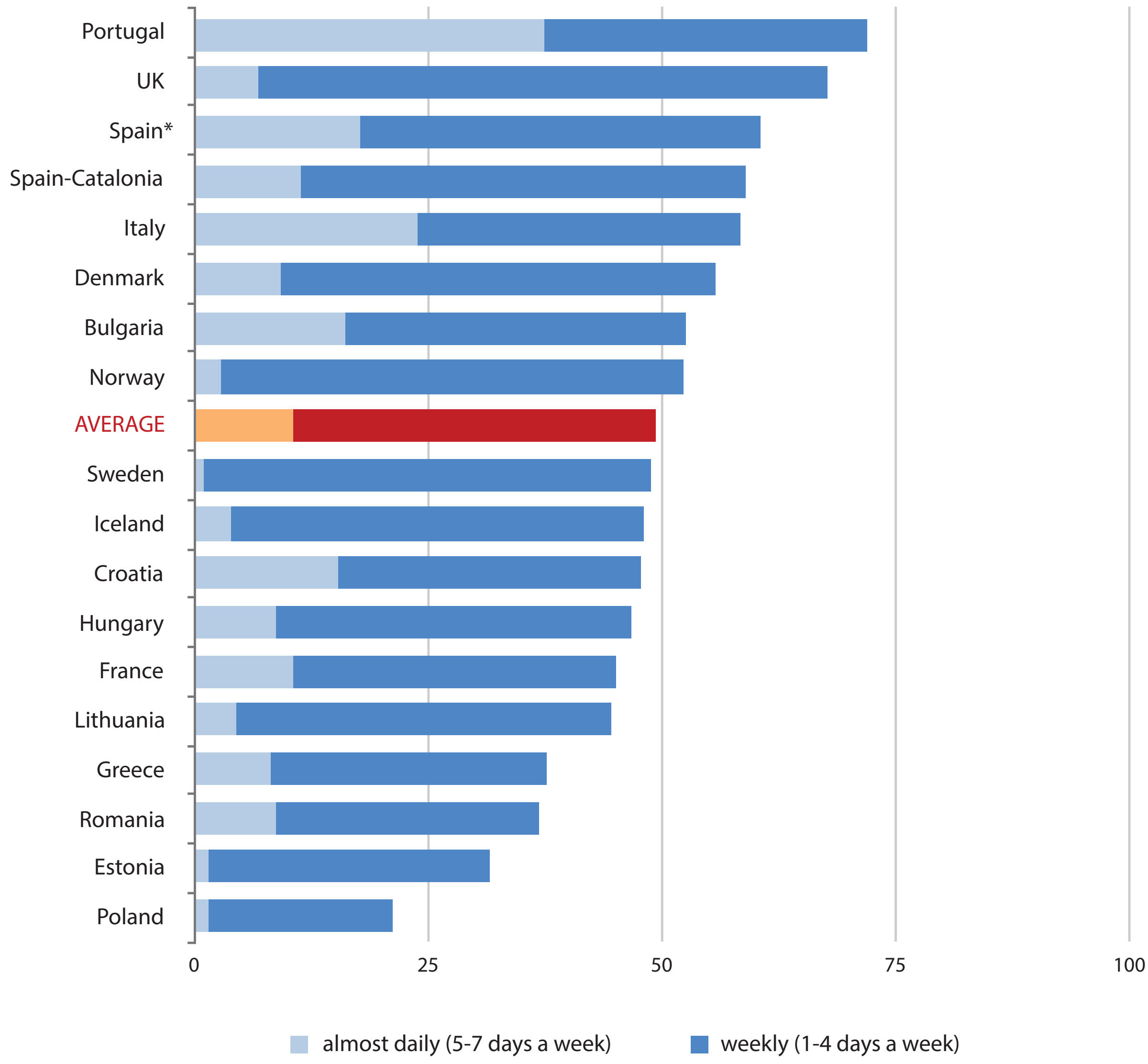
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.4.16. Prevalence of frequent (at least weekly) drinking with family members among all alcohol consumers



Among those who drink alcohol frequently (at least weekly), the highest prevalence of frequent drinking with family members (Figure A3.4.17) is observed in Portugal, UK and Spain (above 60% drink at least weekly with a family members, including a partner). The lowest prevalence of drinking within a family is found in Poland (21.2%) and Estonia (31.6%). Daily drinking with family members is very rare in three Nordic countries, too (in Sweden, Norway and Iceland it is below 5%).

Figure A3.4.17. Prevalence of daily and weekly drinking with family members among frequent alcohol consumers (drinking once a week or more often)



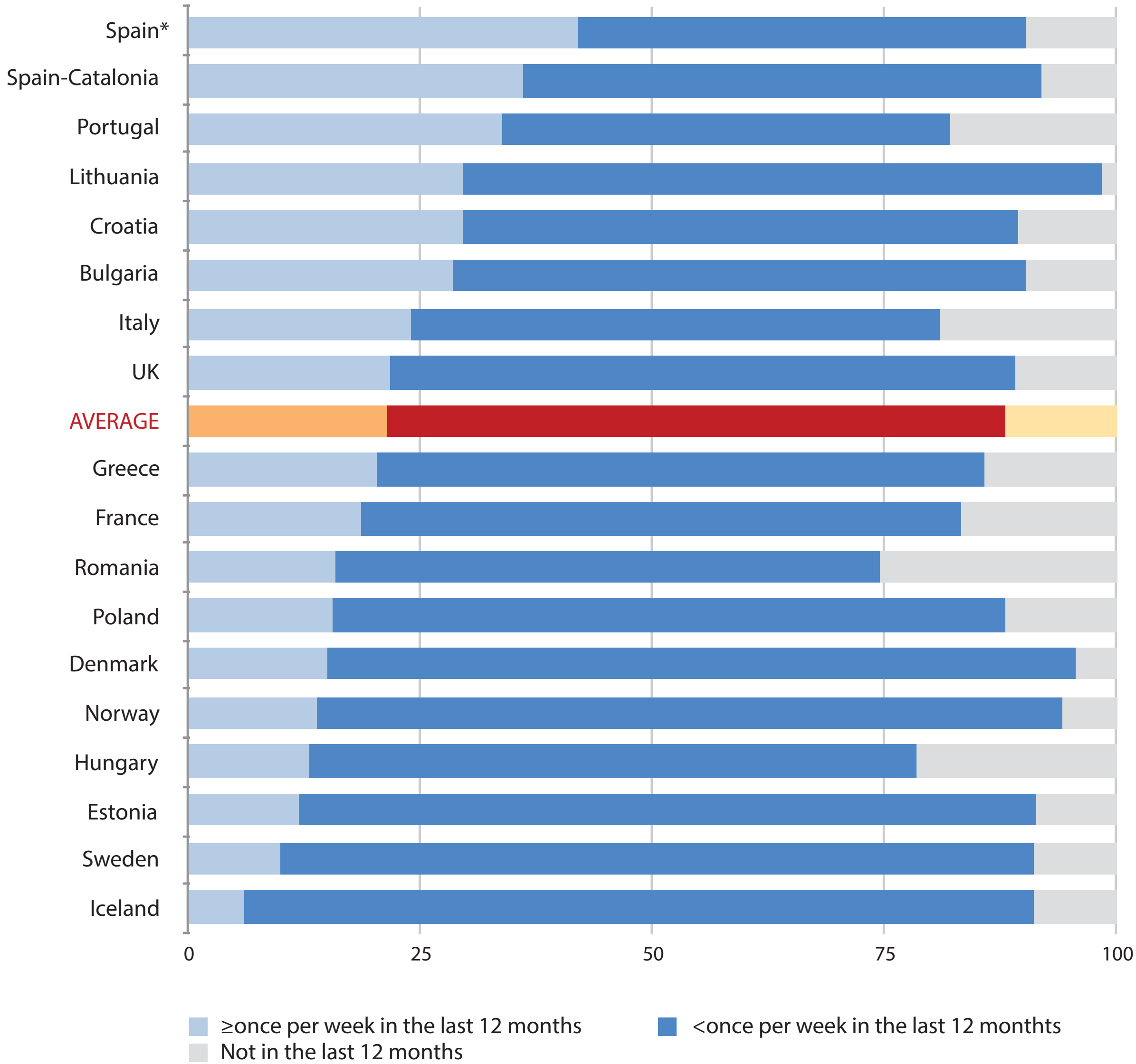
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Drinking with friends, colleagues or acquaintances

Drinking with friends, colleagues or acquaintances (Figure A3.4.18) is also very popular across Europe, with the prevalence not lower than 90% in 9 out of 20 surveys. The highest rate of at least occasional drinking with colleagues is in Lithuania (98.3%) and the lowest in Romania (74.4%).

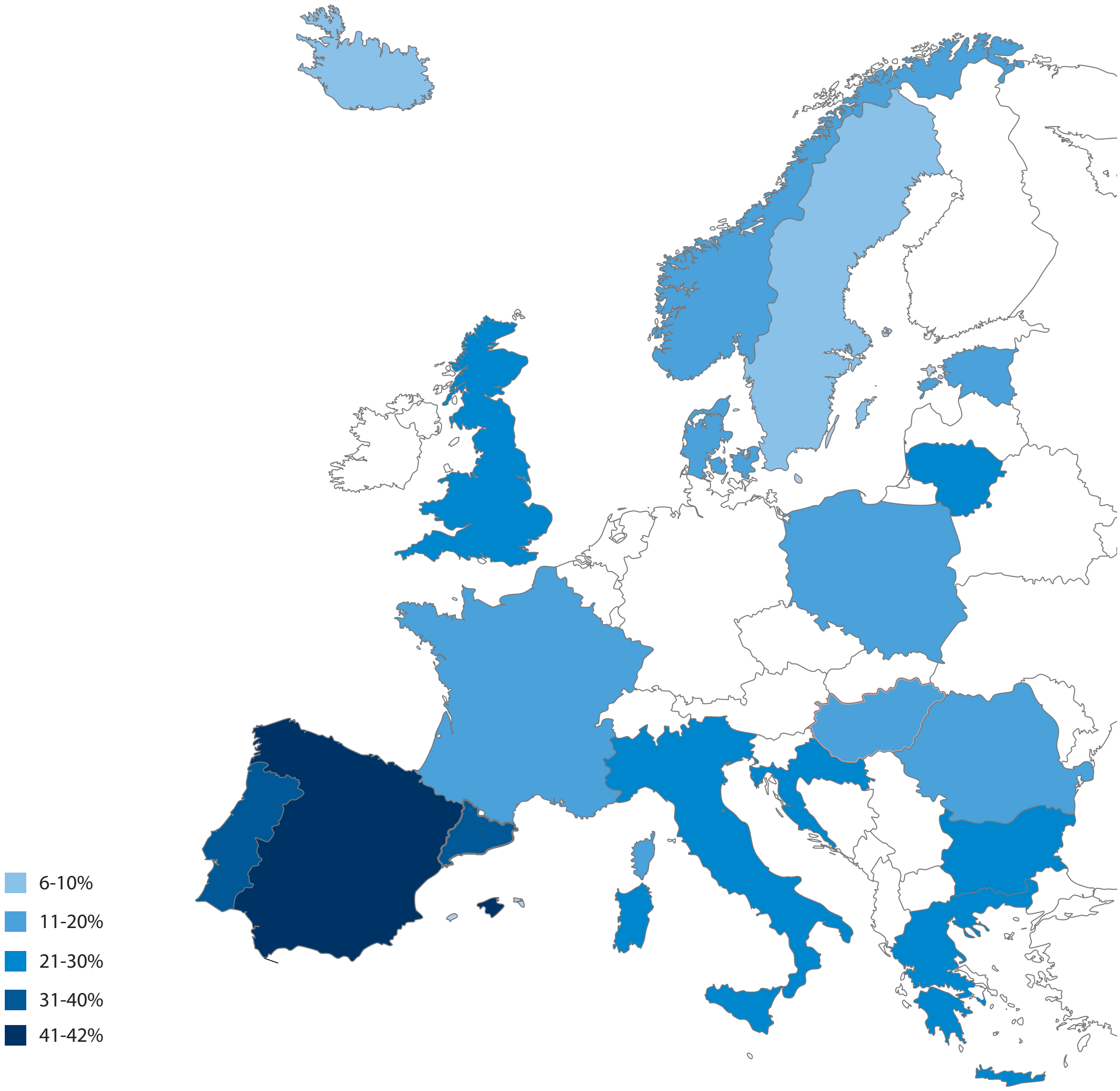
The lowest rates of frequent drinking with friends (Figures A3.4.18, A3.4.19) are observed in Iceland (6% of alcohol consumers drink daily or weekly with friends, colleagues or acquaintances), followed by other Nordic countries (Sweden 9.9%, Estonia 11.7%, Norway 13.7%, Denmark 14.8%) and the former socialist economies countries (Hungary 13%, Poland 15.5%) and Romania 15.6%). The highest rates of those who frequently drink with friends are in Spain (42%), Spain-Catalonia (36.1%) and Portugal (33.8%).

Figure A3.4.18. Proportion of drinkers (%) that consumed alcohol with friends, colleagues or acquaintances at least once a week, more rarely than once a week, or never in the last 12 months



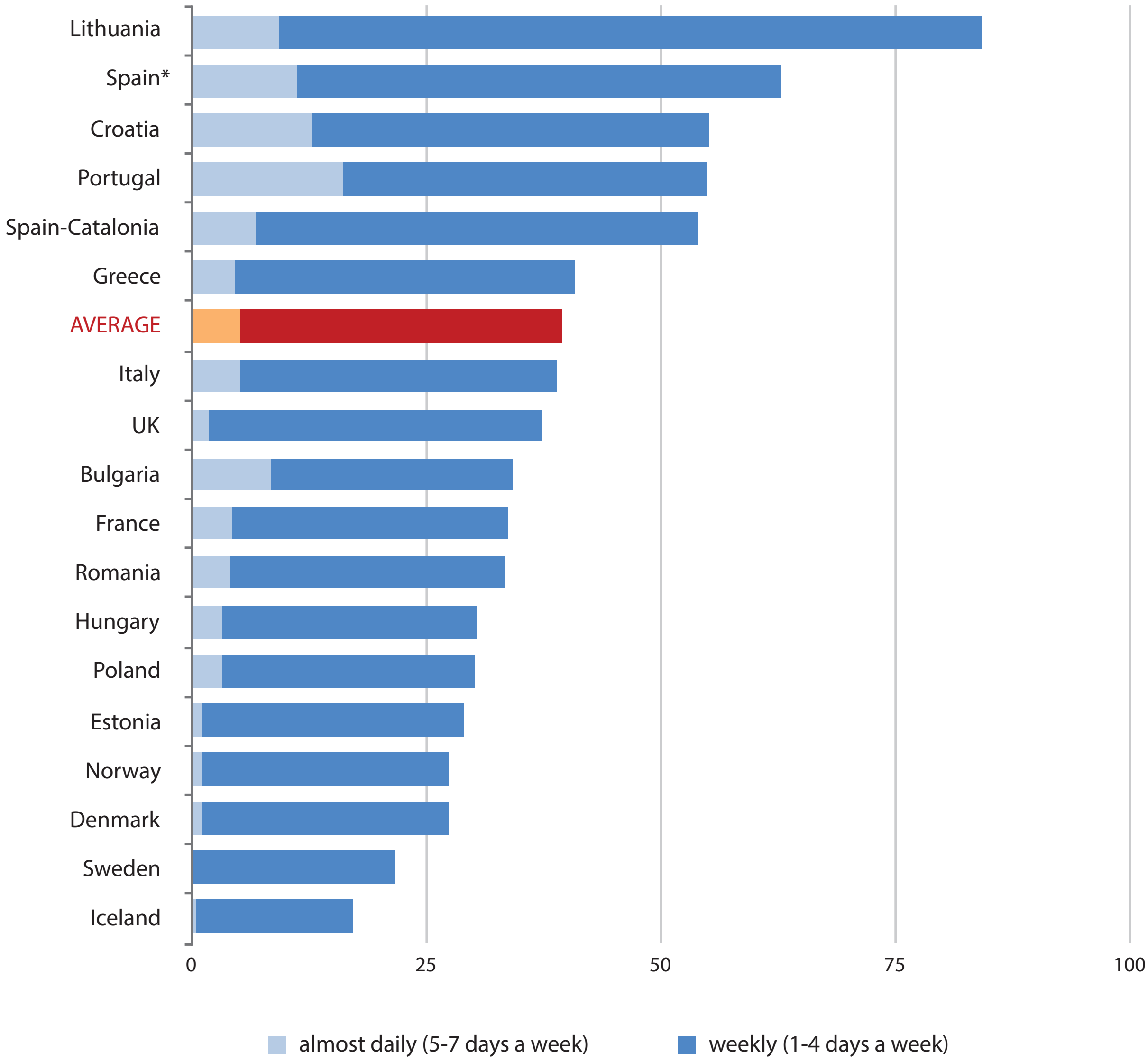
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.4.19. Prevalence of frequent (at least weekly) drinking with friends, colleagues or acquaintances among all alcohol consumers



Among those who drink alcohol frequently (at least weekly), the highest prevalence of drinking with friends, colleagues or acquaintances (Figure A3.4.20) is observed in Lithuania (84.2%) and Spain (63%), followed by two other countries with rates above 50% of frequent drinkers drinking with friends (Croatia, Portugal). The lowest popularity of frequent drinking with friends and colleagues (below 30%) is observed in the Nordic countries (Iceland, Sweden, Denmark, Norway and Estonia).

Figure A3.4.20. Prevalence of daily and weekly drinking with friends, colleagues or acquaintances among frequent alcohol consumers (drinking once a week or more often)

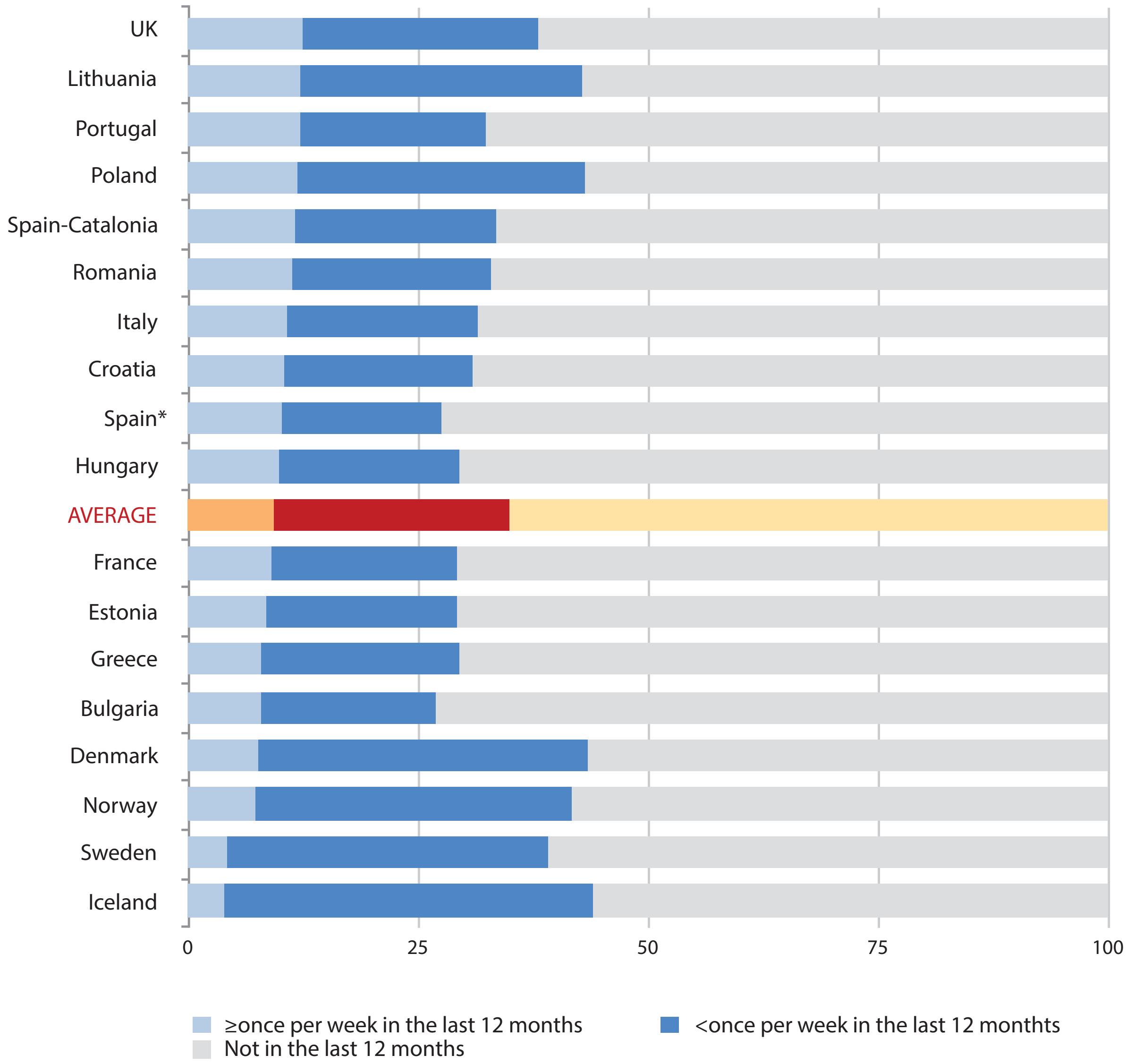


* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Drinking alone

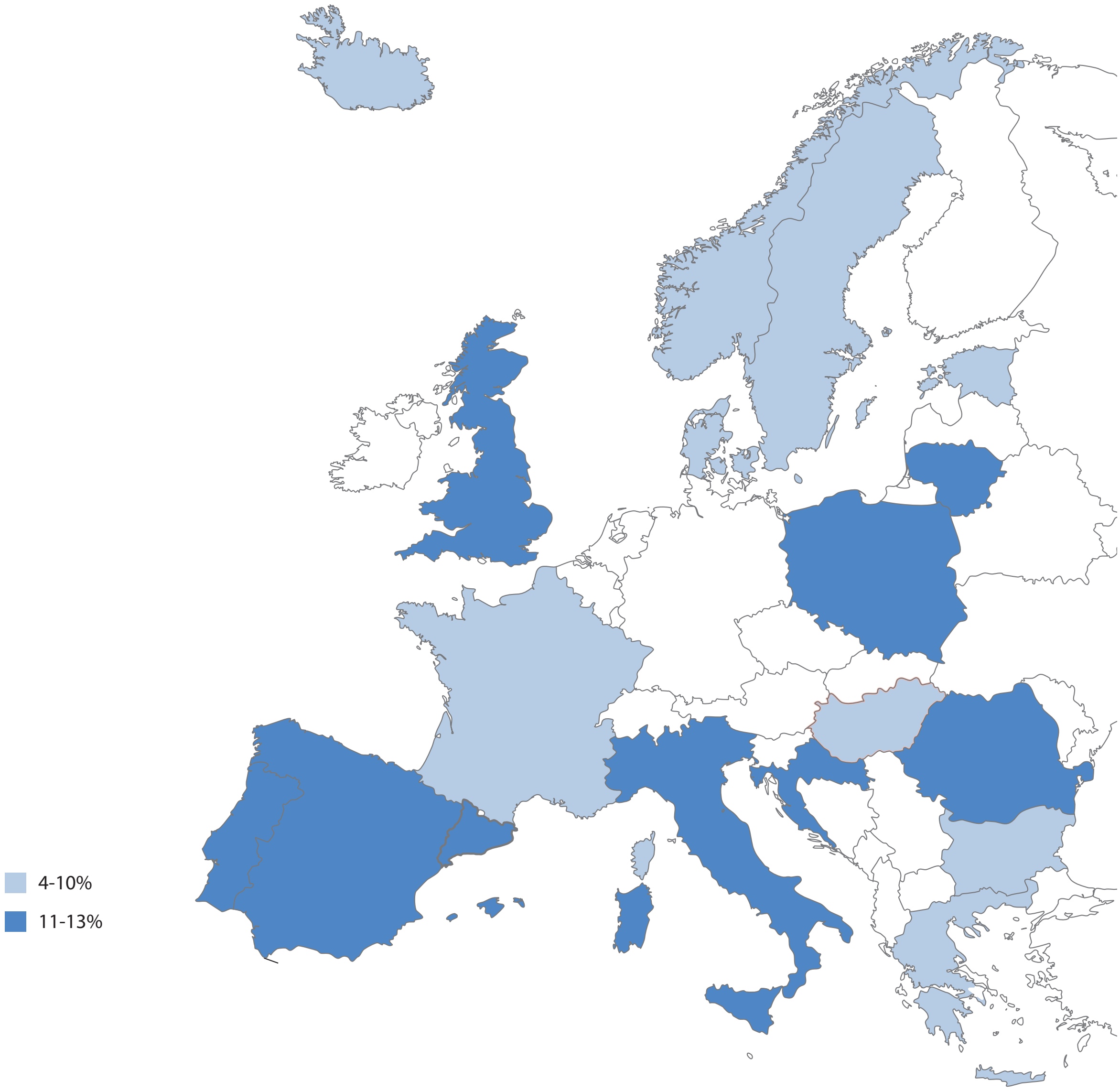
Drinking alone (Figure A3.4.21) is in general very rare, with the highest prevalence (above 40% respondents who at least occasionally have drunk alcohol alone in the past 12 months) in Iceland, Denmark, Poland, Lithuania and Norway and the lowest prevalence (below 30%) in Bulgaria, Spain, Estonia, France, UK and Hungary. The rates of those who drink alone at least weekly (Figures A3.4.21, A3.4.22) are above 10% in UK, Poland, Lithuania, Spain including Spain-Catalonia, Romania, Portugal, Italy and Croatia. The lowest prevalence of frequent drinking in solitude (below 5%) is observed in Iceland and Sweden.

Figure A3.4.21. Proportion of drinkers (%) that consumed alcohol alone at least once a week, more rarely than once a week, or never in the last 12 months



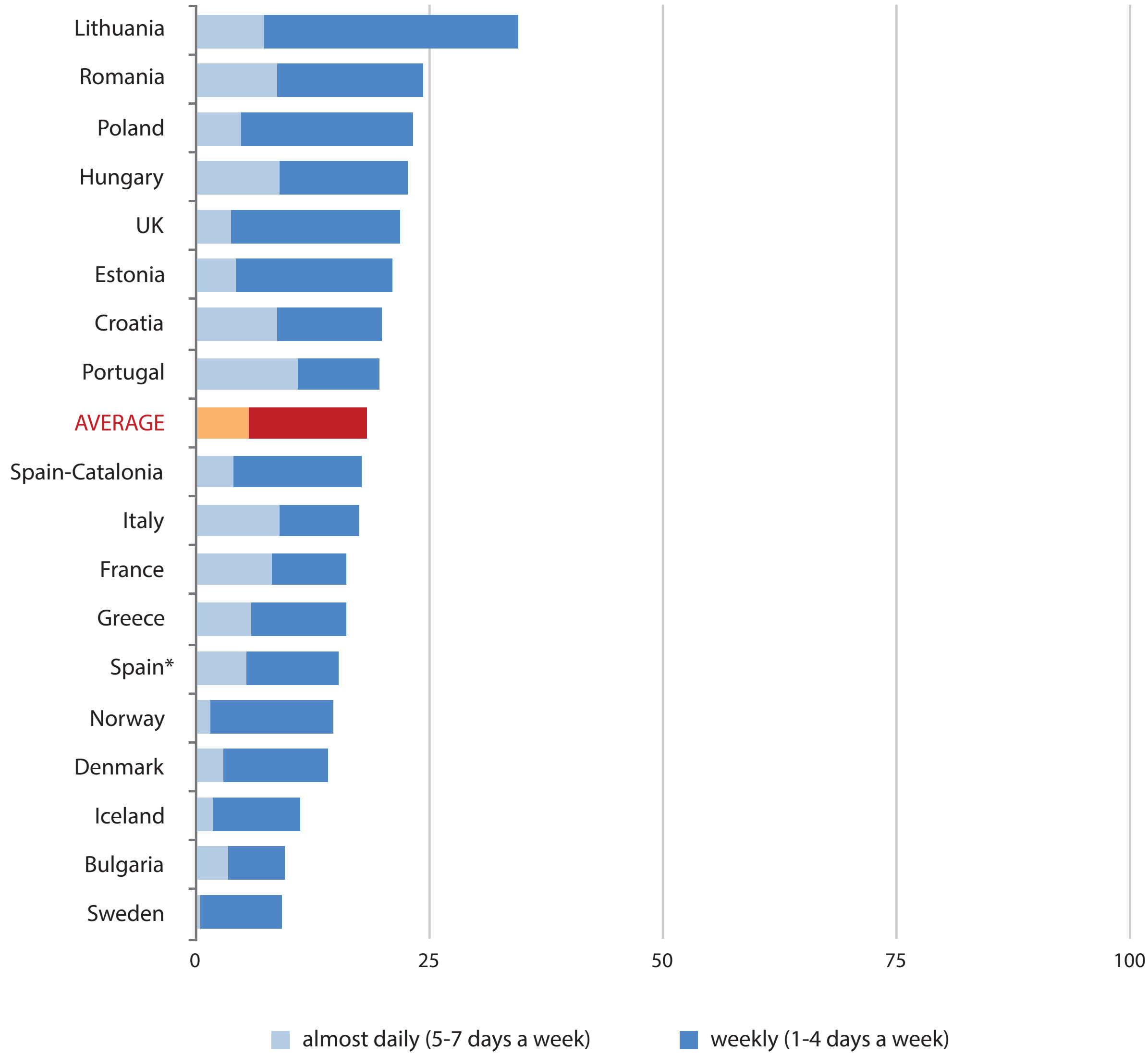
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.4.22. Prevalence of frequent (at least weekly) drinking alone among all alcohol consumers



Among those who drink alcohol frequently (at least weekly), the highest prevalence of frequent drinking alone (Figure A3.4.23) is observed in Lithuania (34.6%). In Romania, Poland, Hungary, UK and Estonia the prevalence of frequent drinking in solitude is also relatively high – above 20%. The lowest popularity of frequent drinking alone (below 10% of frequent alcohol users) is observed in Sweden and Bulgaria.

Figure A3.4.23. Prevalence of daily and weekly drinking alone among frequent alcohol consumers (drinking once a week or more often)



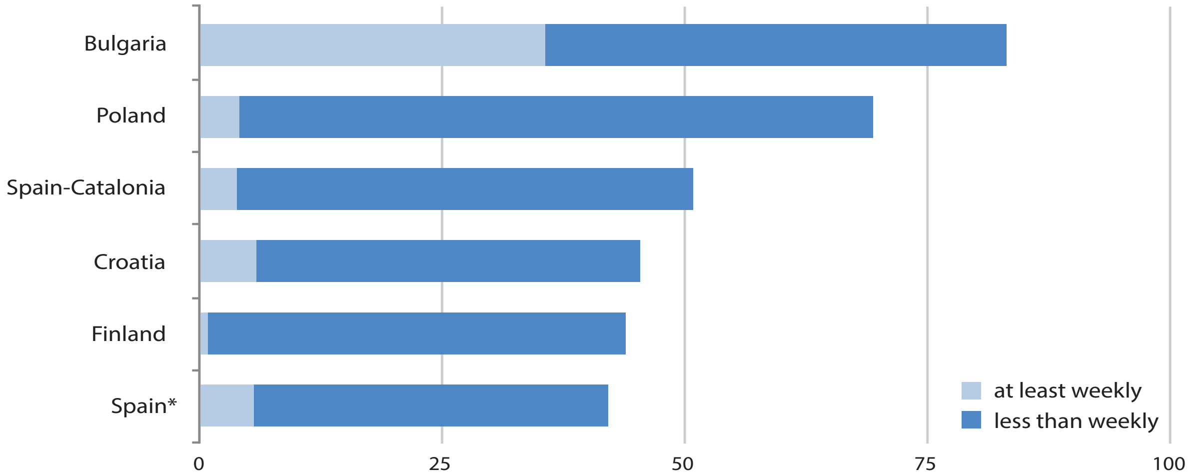
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Context of heavy episodic drinking or risky single occasion drinking (RSOD)

As mentioned earlier in the introductory section of this chapter, context of RSOD was investigated in several countries only, representing however, different drinking cultures. Graphs below show proportions of those who reported heavy episodic drinking in a given circumstances denominated for all respondents who have had at least one risky single occasion of drinking in the past 12 months.

Heavy episodic drinking with a meal (Figure A3.4.24) is more prevalent in Bulgaria (where 83% of risky single occasion drinkers have drunk 40/60 grams of 100% alcohol on one occasion with a meal in the past 12 months) and Poland (70%) then in Spain-Catalonia (51%), Croatia (46%), Finland (44%) and Spain (42%).

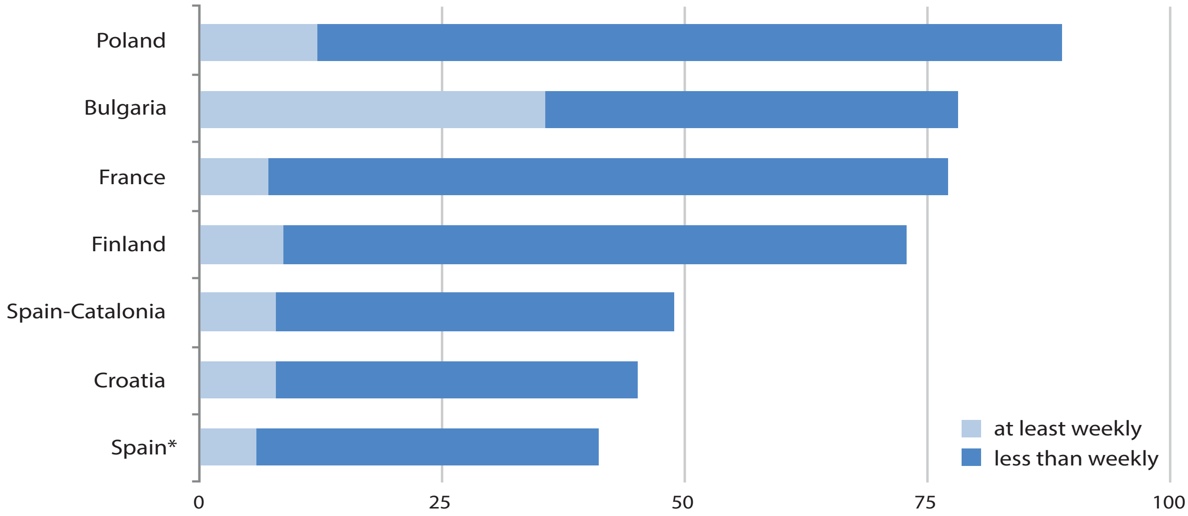
Figure A3.4.24. Proportion of heavy episodic drinkers (%) that in the past 12 months consumed 40+ (female) or 60+ (male) of 100% alcohol on one occasion with a meal



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Heavy episodic drinking at the respondent's home (Figure A3.4.25) is the most prevalent in Poland (where 89% of risky single occasion drinkers have drunk 40/60 grams of 100% alcohol on one occasion at home in the past 12 months), Bulgaria (78%), France (77%) and Finland (73%). Much lower rates of heavy episodic drinking at home are observed in Spain (41%), Croatia (45%) and Spain-Catalonia (49%).

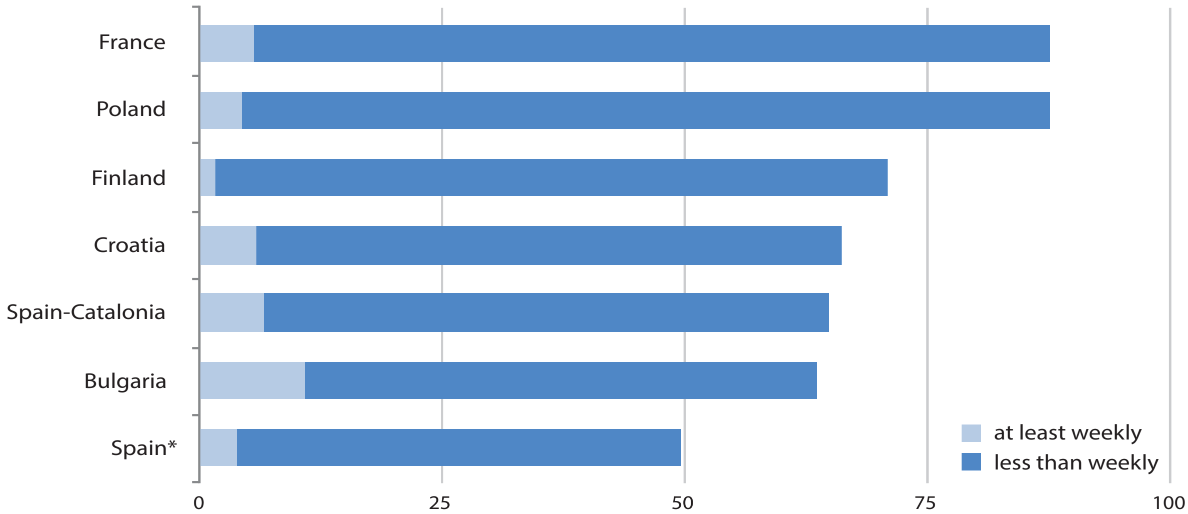
Figure A3.4.25. Proportion of heavy episodic drinkers (%) that in the past 12 months consumed 40+ (female) or 60+ (male) of 100% alcohol on one occasion at home



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Heavy episodic drinking in somebody else's home (Figure A3.4.26) is most prevalent in France and Poland (where 88% of risky single occasion drinkers have drunk 40/60 grams of 100% alcohol on one occasion in somebody else's home in the past 12 months). Lower rates of heavy episodic drinking at somebody else's home are observed in Finland (71%), Croatia (66%), Spain-Catalonia (65%), Bulgaria (64%) and Spain (50%).

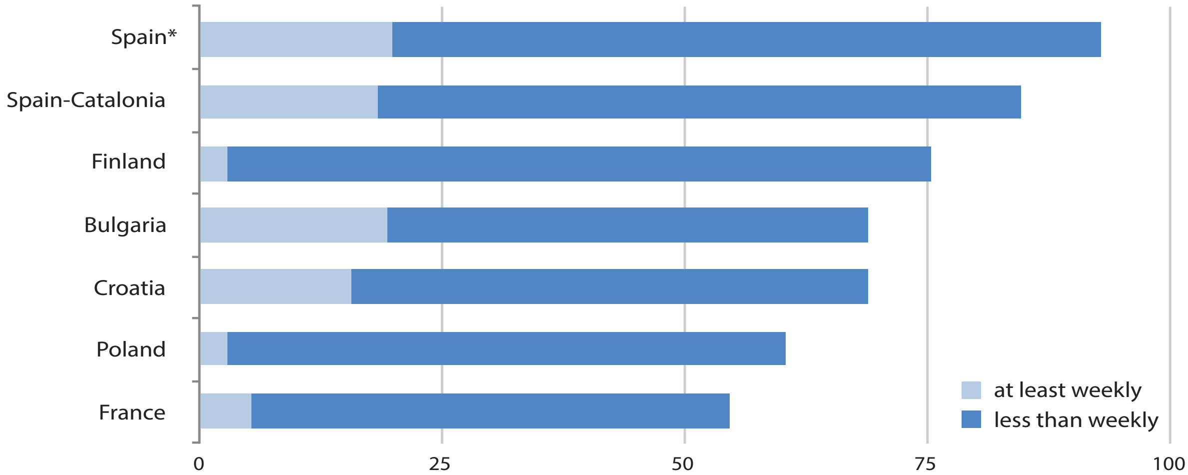
Figure A3.4.26. Proportion of heavy episodic drinkers (%) that in the past 12 months consumed 40+ (female) or 60+ (male) of 100% alcohol on one occasion in somebody else's home



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Heavy episodic on-premise drinking (Figure A3.4.27) is the most prevalent in Spain (where 93% of risky single occasion drinkers have drunk 40/60 grams of 100% alcohol on one occasion in a pub, bar, etc. in the past 12 months), Spain-Catalonia (85%) and Finland (76%). Lower rates of heavy episodic on-premise drinking are observed in Bulgaria (69%), Croatia (69%), Poland (60%) and France (55%).

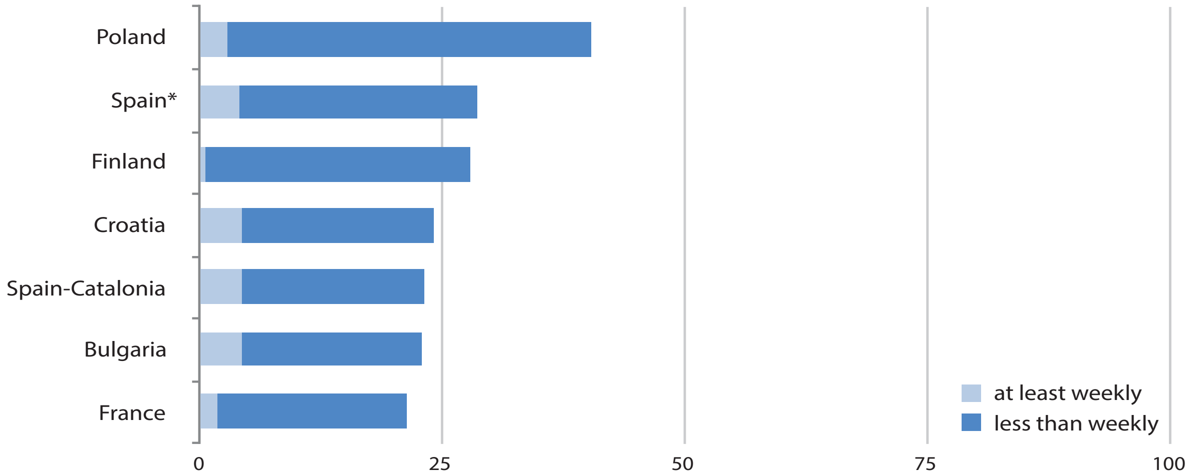
Figure A3.4.27. Proportion of heavy episodic drinkers (%) that in the past 12 months consumed 40+ (female) or 60+ (male) of 100% alcohol on one occasion in a pub, bar, club, restaurant



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Heavy episodic drinking outdoors (Figure A3.4.28) is the most prevalent in Poland (where 41% of risky single occasion drinkers have drunk 40/60 grams of 100% alcohol on one occasion in a park, street, etc. in the past 12 months). Lower rates of heavy episodic drinking outdoor are observed in Spain (29%), Finland (28%), Croatia (24%), Spain-Catalonia (23%), Bulgaria (23%) and France (22%).

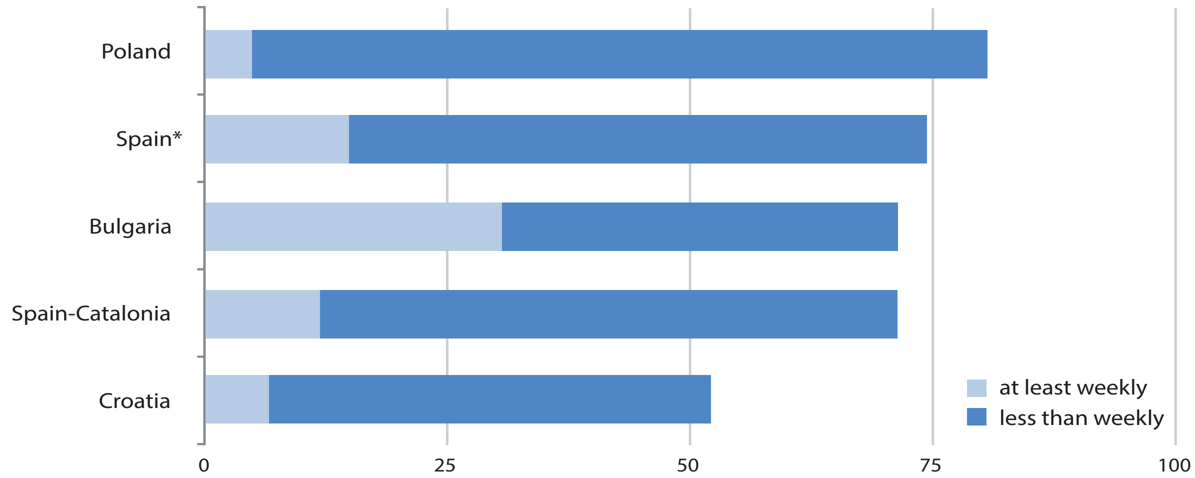
Figure A3.4.28. Proportion of heavy episodic drinkers (%) that in the past 12 months consumed 40+ (female) or 60+ (male) of 100% alcohol on one occasion outdoors



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Heavy episodic drinking with family members including a partner (Figure A3.4.29) is prevalent in Poland (where 81% of risky single occasion drinkers have drunk 40/60 grams of 100% alcohol on one occasion within a family in the past 12 months), Spain (74%), Bulgaria (72%) and Spain-Catalonia (71%). The lowest rates of heavy episodic drinking in the company of relatives are observed in Croatia (52%).

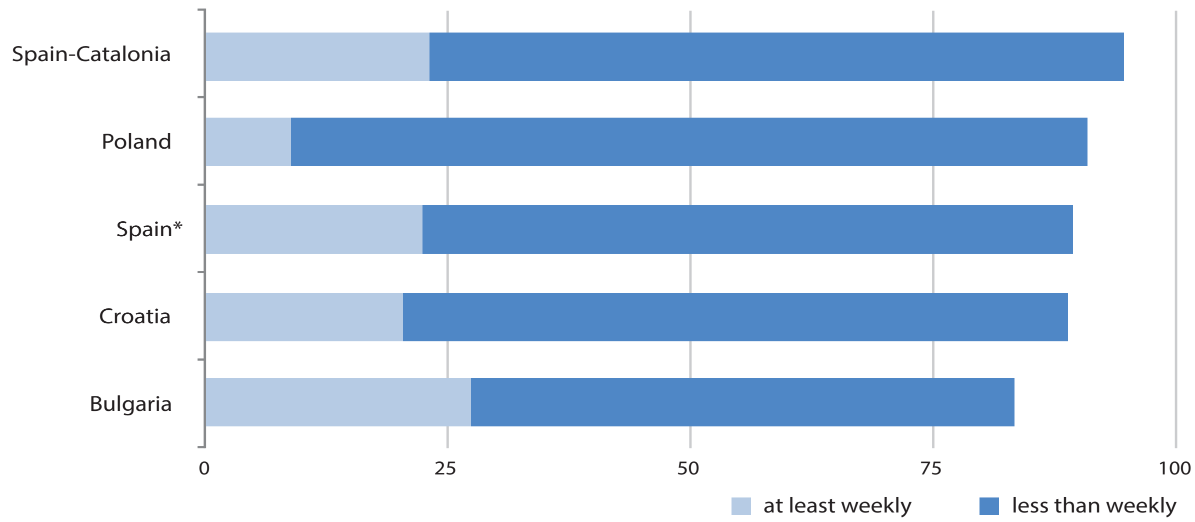
Figure A3.4.29. Proportion of heavy episodic drinkers (%) that in the past 12 months consumed 40+ (female) or 60+ (male) of 100% alcohol on one occasion with a family members



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Heavy episodic drinking with friends, colleagues or acquaintances (Figure A3.4.30) is very prevalent in all participating countries. It ranges from over 90% of risky single occasion drinkers who have drunk 40/60 grams of 100% alcohol on one occasion with friends in the past 12 months in Spain-Catalonia and Poland to over 80% in Bulgaria.

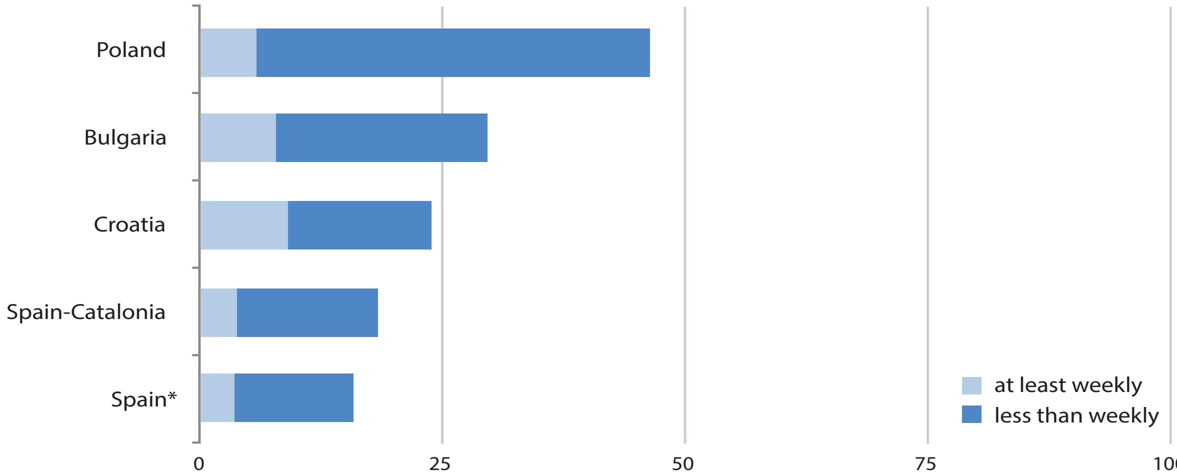
Figure A3.4.30. Proportion of heavy episodic drinkers (%) that in the past 12 months consumed 40+ (female) or 60+ (male) of 100% alcohol on one occasion with friends, colleagues or acquaintances



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Heavy episodic drinking alone (Figure A3.4.31) is most prevalent in Poland (where 46% of risky single occasion drinkers have drunk 40/60 grams of 100% alcohol on one occasion alone in the past 12 months), followed by Bulgaria (30%). Lower rates of heavy episodic drinking in solitude are observed in Croatia (24%), Spain (19%), including Spain-Catalonia (16%).

Figure A3.4.31. Proportion of heavy episodic drinkers (%) that in the past 12 months consumed 40+ (female) or 60+ (male) of 100% alcohol on one occasion alone



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Summary of survey data on the context of drinking

Data collected in the RARHA SEAS surveys provide a lot of information allowing various cross-country and cross-situation comparisons of contexts of drinking in Europe. Being aware of all these analytic opportunities, we decided to limit the summary of the scope of results to the most basic comparisons of the prevalence of drinking in various drinking contexts.

1. **Prevalence of at least occasional drinking in various contexts among all alcohol consumers**

   On average in Europe the most popular context of drinking is drinking in the company of friends or family members, at home and with meals. Over 80% of alcohol consumers have been drunk in such circumstances at least occasionally in the past 12 month. A little less prevalent is drinking at somebody else's home (79%) or in pubs, bars, restaurants or clubs (73% on average). Rates of those who drink alone or outdoors are much lower (respectively 35% and 28% on average).

   The highest cross-country differences (above 30%) in the prevalence of at least occasional drinking are observed for drinking places such as somebody else's home, pubs, bars etc. and outdoors. In general, on-premise alcohol drinking is more prevalent in richer, old EU member states than in poorer, new members of the EU. Drinking outdoors or at somebody else's home is more popular in Northern than in Southern countries.

2. **Prevalence of frequent (at least weekly) drinking in various contexts among all alcohol consumers**

   On average in Europe, the highest rates of drinking frequently in a given context are observed for drinking at home, with meals, with family members or friends. Over 20% of alcohol consumers have drunk in such circumstances at least weekly in the past 12 months. Less prevalent is frequent drinking in pubs, bars, restaurants or clubs. The lowest rates (below 10%) are observed for drinking alone, in somebody else's home and outdoors.

   The highest cross-country differences in the prevalence of frequent drinking in various circumstances (above 30%) are observed for drinking with a meal, in pubs, bars etc., with friends and family members. In general, frequent on-premise alcohol drinking, as well as drinking with a meal, is more prevalent in Southern Europe than in Northern and Central European countries. Drinking with friends, colleagues or acquaintances is more popular in Southern countries and Lithuania than in North and Central Europe. Drinking with family members is more prevalent in Southern countries and the UK than in new EU members from Eastern Europe, Iceland and Greece.

3. **Prevalence of daily and weekly drinking in various contexts among frequent alcohol consumers (those who drink alcohol at least once a week)**
   Among those who drink alcohol frequently (at least once a week), on average in Europe over 60% usually drink at home, 54% with meals, 49% with family members and 39% with friends. Less prevalent is frequent drinking in pubs, bars, restaurants or clubs (24%), at somebody else's home (18%) or alone (18%). Only 4% of frequent alcohol consumers drink outdoors. In general, the prevalence of frequent drinking in various contexts is highly differentiated across countries participating in the survey. For example, over 80% of frequent alcohol consumers in Lithuania and less than 20% in Iceland usually drink with friends. Interestingly, Lithuania is the only country from the Northern region where drinking with friends is generally as popular as in South Europe. Higher percentages of frequent alcohol consumers drink with family members in the South-West European region (besides Greece) than in post-communist Baltic countries and Romania. On the other hand, frequent drinking alone is more prevalent in Lithuania and Central Europe than in the North-West region and Bulgaria. There is also a clear cut difference between South Europe and other regions in terms of frequency of regular on-premise drinking among those who drink alcohol on a daily or weekly basis (in Spain it exceeds 60% while in Estonia, Poland and Iceland it is below 10%).
4. **Prevalence of at least occasional drinking in various contexts among heavy episodic alcohol drinkers**
   As questions on the context of heavy episodic drinking were asked in only a few national surveys, the results can not be summarised in terms of general European or regional trends. However, some conclusions may be formulated concerning countries participating in this part of the survey, which may be interpreted as a more general hypothesis. Firstly, it seems that a great majority of heavy episodic drinkers at least occasionally drink with friends, colleagues or acquaintances (approximately 80%–90%) including 20%–30% of those who do it at least weekly in Southern countries (represented by Spain, Spain-Catalonia, Croatia and Bulgaria). Weekly or daily heavy drinking with friends is less prevalent in Poland. Occasional heavy episodic drinking with family members is also very prevalent (70%–80%) in four out of those five countries (besides Croatia). The prevalence of heavy episodic drinking alone in four Southern countries ranges between 15% and 30%, while in Poland it exceeds 45%. Also Poland is the only country where more than 40% of heavy episodic drinkers drink outdoors at least occasionally (in other countries the prevalence range is 20%–30%).
   The majority of heavy episodic drinkers drink occasionally in different places (with the lowest frequency of drinking outdoors). Interestingly, in Spain and Spain-Catalonia the most popular choice is drinking on-premise, while the lowest prevalence in this country is observed for drinking at private homes (respondent's own or somebody else's). The opposite is observed in Poland and France where drinking is much more prevalent in private settings than in pubs, bars or restaurants.

References

Bourgault, C., Demers, D. (1997). Solitary drinking: a risk factor for alcohol-related problems? *Addiction, 92(3),* 303–312.

Foster JH. (2008) The Licensing Act 2003: 18 months down the road. Drugs Education Prevention and Policy. 15, 1–6.

Social and Cultural Aspects of Drinking. A report to the European Commission, March 1998, The Social Issues Research Centre, Oxford, UK.

Freisthler B, Lipperman-Kreda S, Bersamin M, Gruenewald PJ (2014) Tracking the When, Where, and With Whom of Alcohol Use: Integrating Ecological Momentary Assessment and Geospatial Data to Examine Risk for Alcohol-Related Problems. Alcohol Res. 2014;36(1):29–38.

Rehm J., Rehn N., Room R., Monteiro M., Gmel G., Jernigan D., Frick U. (2003). The Global Distribution of Average Volume of Alcohol Consumption and Patterns of Drinking, Eur Addict Res;9:147–156, DOI: 10.1159/000072221.

Savic, M., Room, R., Mugavin, J., Pennay, A., & Livingston, M. (2016) Defining "drinking culture": a critical review of its meaning and connotation in social research on alcohol problems, Drugs: Education, Prevention and Policy, 23:4, 270–282.

Tucker, J., S., Ellickson, P., L., Collins, R., L., Klein, D., J. (2006). Does solitary substance use increase adolescents' risk for poor psychosocial and behavioral outcomes? A 9-year longitudinal study comparing solitary and social users. *Psychology of Addictive Behavior, Vol. 20, No, 4,* 363–372.

Wells S, Mihic L, Tremblay PF, Graham K, Demers A. (2008) Where, with whom, and how much alcohol is consumed on drinking events involving aggression? Event-level associations in a Canadian national survey of university students. Alcohol Clin Exp Res.;32(3):522–33.

Wells, S., Graham, K., Speechley, M., Koval, J.J. (2005). Drinking patterns, drinking contexts and alcohol-related aggression among late adolescent and young adult drinkers. *Addiction, 100,* 933–944.

A3.5 Unrecorded alcohol

Clara Vital, Cláudia Urbano, Casimiro Balsa and Esa Österberg[1]

Introduction

Drinking alcohol is an important public health problem. It is an even more important problem when there are many different ways of acquiring the substance. The amounts of alcohol acquired from some sources are recorded and published in official alcohol consumption statistics. Alcohol consumption figures may be based on data on alcohol taxation or data from formal off- and on-premise alcohol sales, while other ways of acquiring alcohol go beyond these official statistics, like amounts of alcoholic beverages smuggled into the country or amounts of alcoholic beverages travellers are importing when returning to their home countries. Unrecorded alcohol consumption is estimated to be a significant part of all alcohol drunk by human beings. According to the World Health Organization (WHO), worldwide almost a quarter of all alcohol consumed consists of unrecorded alcohol. In the area of WHO EURO the corresponding figure is 17 per cent (WHO 2014). That is why questions screening unrecorded alcohol can be important in a survey research on alcohol consumption.

As WHO states, unrecorded alcohol refers to alcohol that is not taxed in the country where it is consumed because it is usually produced, distributed and sold outside the formal channels under government alcohol control. Unrecorded alcohol consumption in a country usually includes consumption of home-made or informally produced alcohol (legal or illegal), smuggled alcohol, drinking of alcohol intended for industrial or medical uses, and alcohol obtained through cross-border shopping (which usually is recorded in a different jurisdiction). Sometimes these alcoholic beverages are traditional drinks that are produced and consumed in the community or in homes. Home-made or informally produced alcoholic beverages are mostly fermented products made in Europe from sugar, wheat or fruits. Unrecorded consumption also includes so-called surrogate alcohol, commonly ethanol that has not been produced as beverage alcohol but is used as such, e.g. mouthwashes, denatured alcohol, medicinal tinctures, aftershaves and perfumes (WHO 2014). In this chapter we present information on unrecorded alcohol supply, based on the set of optional questions that eight different surveys added to their RARHA SEAS. These included Croatia, Finland, Greece, Hungary, Poland, Portugal, Spain and Spain-Catalonia[2].

Estimating unrecorded alcohol consumption

Throughout its history alcohol and drinking alcohol have been controlled some way or another. Earlier in history alcohol control was based almost totally on informal alcohol control, i.e. on different norms and traditional habits, not on laws and official regulations. When official regulations grew stronger and more comprehensive, different kinds of measures of alcohol consumption also became more readily available and it became easier to estimate and calculate the amount of alcohol consumed. For instance if only the landowners had the right to distil spirits and if the size of the stills or the quantity which the landowners were allowed to distil were regulated, one had the possibility of estimating the total amount of spirits production in a country. Likewise, if alcohol production and sales were taxed, the amount of taxes collected was a good basis for an estimate of alcohol consumption.

Taken together, taxing alcoholic beverages and putting different kinds of alcohol control measures into effect also increased our knowledge of the alcohol field and often gave some

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[2] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

tools for estimating the level of alcohol consumption in that society. Throughout history, new control measures have also changed some elements of unrecorded alcohol consumption to recorded alcohol consumption. For instance nowadays, because of increased control over travellers' alcohol imports, in Norway we know exactly how much alcoholic beverages have been sold tax free to incoming travellers. Despite these increasing possibilities it is, however, even today not an easy task to measure unrecorded alcohol consumption. The availability of statistical data on unrecorded alcohol consumption also varies between different countries because not all countries are eager to keep statistical records of alcohol consumption or actively collect survey or other data on unrecorded alcohol, and when collecting this kind of survey data, they do not use the same kind of standardized questions. The availability of data also varies because the amount of different unrecorded alcohol items may vary greatly from country to country which clearly guides interest in collecting data on unrecorded alcohol consumption.

The way data on unrecorded alcohol is collected is also one reason why available statistical data on the amount of unrecorded alcohol consumption varies according to different estimates. For instance, some studies (e.g. Lachenmeier, 2016) point out that the amount of unrecorded alcohol consumption in the EU is 13% of all alcohol consumed while others (e.g. Rehm & Poznyak, 2015) report well over 20%. According to WHO's Global status report on alcohol and health 2014, a total of 10.9 litres of ethyl alcohol per person was consumed in Europe. Of the total alcohol consumption 1.9 litres consisted of unrecorded alcohol, representing 17% of total alcohol consumption.

The WHO has attempted to estimate the amount of unrecorded alcohol consumption in all seven countries where an optional section on unrecorded alcohol was applied in the course of the RARHA SEAS survey (Croatia, Finland, Greece, Hungary, Poland, Portugal and Spain). The WHO collected data show that the unrecorded alcohol consumption in Croatia was estimated to be 4.5 litres pure alcohol per capita for population older than 15 years in the second half of the 1990s (http://www.who.int/substance_abuse/publications/en/croatia.pdf). The corresponding figures were 4.0 litres in Hungary (http://www.who.int/substance_abuse/publications/en/hungary.pdf), 3.0 litres in Poland (http://www.who.int/substance_abuse/publications/en/poland.pdf), 2.0 litres in Greece as well as in Finland (http://www.who.int/substance_abuse/publications/en/greece.pdf, http://www.who.int/substance_abuse/publications/en/finland.pdf), and 1.0 litres in Portugal and Spain hhttp://www.who.int/substance_abuse/publications/en/portugal.pdf, http://www.who.int/substance_abuse/publications/en/spain.pdf) According to the WHO Global status report on alcohol and health 2014, unrecorded alcohol consumption was generally on the decrease in these countries between the second half of the 1990s and the years 2008–2010. In 2008–2010 the level of unrecorded alcohol consumption in all these countries was around 2 litres of pure alcohol per inhabitant 15 years and older.

The context of unrecorded alcohol

In Croatia there is a tradition of home production of wine and spirits for personal use. There is regulation for registering production of alcoholic beverages even if it is home production. However, there is no research on unrecorded supply. According to The Law on Excise Duties (http://www.zakon.hr/z/545/Zakon-o-tro%C5%A1arinama) all producers of alcoholic beverages are obligated to register their production to the Ministry of Finance (Custom Administration), and, depending on the amount of alcohol produced, are obligated to pay excise tax (producers who produce 20 litres of pure alcohol and less per year are exempted from paying excise tax but not from paying a flat rate). Excise tax is calculated differently for different types of alcoholic beverages. The previously mentioned law also regulates penalties for not respecting the rules and regulations. Illegal production and/or sale of home or informally produced alcoholic beverages is detected through case by case reporting and by police work. Penalties for illegal production and/or sale include fines, criminal prosecution and seizures.

In Finland alcohol availability has been strict and alcohol prices have been very high. Therefore, tax free alcohol and boarder trade have played an important role in Finnish unrecorded alcohol consumption. The amount of travellers' alcohol imports have, however, been restricted by the quotas of tax free alcohol imports which in the beginning of the 1990s were still only 1 litre distilled spirits and 1 litre of wine (or 2 litres of wine) and 2 litres of beer. In January 2004 these quotas were abandoned for alcohol imports from other EU countries, and in May 2004 Estonia, with clearly lower alcohol prices than Finland, joined the EU. Estonia is a neighbouring country of Finland on the other side of the Gulf of Finland, a two hours boat trip away. From May 2004 it has been possible to import unlimited amounts of alcoholic beverages tax free from Estonia for personal consumption. This meant that since 2004 travellers' alcohol imports have been the most important source of unrecorded alcohol in Finland. In the 1950s and 1960s home production of alcoholic beverages were still important sources of unrecorded alcohol even if home distilling was an illegal activity.

In general, people living in the rural areas of Greece are accustomed to cultivating a few vines in order to produce wine and ouzo/tsipouro for their own use. On the other hand, there are no available research data that confirm this view or give the amount of this production. The legislation regulating the production and supply of alcoholic beverages (wine, ouzo / tsipouro, beer) has been in force since 2001 in Greece (Law 2629/2001). Moreover, according to the Ministry of Rural Development and Food, a wine producer that produces up to 10 hectolitres of wine for their own use is not obliged to declare this amount to the competent state services. Up to now, there is no information in a legal document on unrecorded alcohol beverages and on availability and affordability of unrecorded alcoholic beverages in Greece.

From 1938 the production, distribution, export and import of spirits had been a state-monopoly in Hungary. After the political system changed in 1990, spirits distillation became a main activity of registered professional commercial distillers; private persons could use their services for brandy production, and spirits became the subject of excise taxation. In 2010 the distillation market was liberalized by the government, making home distillation official and also making it exempt, up to a limit, from excise taxation. Since then, the liberalized home distillation rules have been tightened and now distillation requires preliminary registration and tax-payment. However, besides legal, registered distillation there was always a massive illegal spirits production in Hungary which completely by-passed the official registration obligations and taxation.

At different periods of Hungarian history, regulation restricted this illegal or semi-legal activity, but in contrast to this, more and more room for unregistered distillation was allowed, or rules, easy to bypass by home or illegal distillers, were created. Similarly, for a long time wine production for a had been subject to taxation; traditionally wine was one of the products subjected to decima (tithe)-paying for the church and landlords. After the political system changed in 1990, wine became a product subject to excise taxation; actually, however, the rate of excise tax on grape-wine is zero, and home production is legal up to a limit for personal and family consumption (1.000 litres/year for vineyard owners and 500 litres for those not having a vineyard but only buying grapes). This regulation provides a great opportunity for home (non-registered) production and consumption, and there is no doubt that this type of wine production finds ways into the illegal or non-registered market.

The latest research regarding the estimated proportion of nonregistered alcohol consumption was carried out by Hétfa and Bellresearch Institute in Hungary in 2012. According to the results, 30% of the total wine consumption and 40% of the total spirit consumption derived from unregistered alcohol production. Availability of non-registered beverages is common in Hungary and the affordability of these products – especially in the case of spirits – is much greater than that of registered spirits.

In Poland the modern State alcohol monopoly for spirits was introduced just after Poland regained independence in 1918 and then reintroduced in 1944. The beginning of the 1990s witnessed rapid transition to a market economy, and demonopolisation and privatization of the alcohol sector. However, the production of spirits requires a special permit from the regional authorities. Without a permit distilling spirits is illegal and punishable. Alcoholic beverages, in particular spirits, are heavily taxed and relative prices of vodka and other spirits are still high compared to neighbouring countries including EU members and Belarus, Russia and Ukraine. On the other hand, compared with the period of state monopoly, alcohol affordability and availability increased as the number of alcohol outlets rose from less than fifty thousand in the late 1980s to over two hundred thousand by the 1990s. Since the very beginning of the economic transition, new entrepreneurs have attempted to take advantage of high taxes in

Poland and low prices in neighbouring countries and established dense distribution networks to intercept alcohol revenues. Their activities covered a wide range of illegal and semi-legal actions such as importing huge volumes of alcohol apparently for private use, smuggling, contamination and then purification of alcohol, establishing small or medium size fruit wine producing enterprises which disappear before taxes were due to be paid. Primarily, illicit alcohol was distributed through legal outlets whose enormous numbers and unlimited hours of operation made any control effort futile. As this illicit flow of alcohol was distributed in fake original containers, an average consumer rarely realised that he or she purchased illegal stuff. Therefore, a survey approach to estimate the volume of unrecorded alcohol is not as feasible as indirect indicators e.g. first time alcoholic psychoses.

In Portugal, different authors note that the figures on recorded alcohol consumption suffer from limitations as they ignore production and consumption outside commercial channels. At the moment, the underestimation of real consumption is difficult to quantify but it can be claimed that a substantial part of alcohol beverage production is not declared. There are legislative efforts directed towards commercialisation and these focus mainly on new plantations of vines. Still, production primarily for private domestic use, domestic storage, or direct supply of small quantities of products to the final consumer or to local retail establishments is not included in the recording system.

As is the case for other countries included in this section, figures on unrecorded alcohol in Spain are limited to some references in the scientific literature (Sordo et al. 2016, Rhem et al. 2014 & Norstrom 2001) in which indirect estimation methods have been used to obtain at least an unrecorded minimum share to be taken into account when estimating national alcohol per capita consumption. According to different papers, unrecorded alcohol in Spain would account for a discrete amount (around 1 litre of pure alcohol per capita consumption) (WHO 2014).

Overall, it is assumed that Spain, being an alcohol producer country with no alcohol monopoly, wide availability and relatively lower alcohol prices than other EU countries, it is likely that unrecorded alcohol will probably be linked to traditional (mostly rural) alcohol production of small quantities for home consumption (mainly wine or some fruit-based distilled products in some Spanish Autonomous Communities). However, there is also some evidence of clandestine illegal alcohol distilling activity aimed at producing and selling fruit-based distilled spirits at cheaper prices while circumventing taxation and existing regulations. Finally, once in a while, there are published anecdotal or more in-depth reports of alcohol smuggling (Cuesta, 2014) (either adulterated or unlabelled alcoholic beverages) with alcohol distributed within nightlife settings, and eventually entailing health risks to consumers.

By including this set of questions within the RARHA questionnaire, it is likely that Spain will have some reference figures on unrecorded alcohol to start with. Additionally, it is an opportunity for the Spanish Observatory on Drugs to test survey questions on unrecorded alcohol and see if they are eligible and appropriate to be included in the Spanish series of national drug surveys.

Questions in this study by country

In the RARHA SEAS study eight jurisdictions from seven countries put optional questions on unrecorded alcohol in their national surveys (Croatia, Finland, Greece, Hungary, Poland, Portugal, Spain and Spain-Catalonia). These optional questions vary in type and number between the seven countries that screened unrecorded alcohol consumption.

The Croatian survey asked directly how much unregistered alcohol – spirits, wine and beer (in litres) the interviewee had personally purchased in the last 12 months from abroad and how much was purchased from domestic sources.

The Finnish survey had a different set of questions. It was asked if, over a twelve month period, the interviewee had: a) ordered alcoholic beverages from foreign countries through the internet; b) acquired alcoholic beverages from foreign countries or from ships or aeroplanes trafficking between Finland and foreign countries by him/herself or by getting them from other persons; c) manufactured alcohol beverages in his/her home or acquired them from someone who had manufactured alcoholic beverages at home. The quantities in litres of distilled spirits, wines, beer, cider and long drinks ordered through the internet from foreign countries were asked, followed by questions about the quantity of these five types of beverage acquired from foreign countries or from ships or airplanes trafficking between Finland and foreign countries. Also the quantity of litres of distilled spirits, wines, beer, cider and long drinks that were manufactured in the interviewee's home or acquired from someone who had manufactured them at home, were part of the set of question on unrecorded alcohol acquisition.

The Greek survey had a last year prevalence question about the acquisition of home-made alcohol produced at the interviewee's home or at somebody else's home such as a relative, friend, or a known or unknown person. Those answering affirmatively, were then asked how many bottles of home-made ouzo or tsipouro ('raki' or 'tsikoudia') were brought home, as well as how many bottles of home-made wine were brought home. The measurement of unrecorded alcoholic beverages in the Greek RARHA SEAS study included only home produced ouzo or tsipouro (~40 per cent alcohol) and wine. Time and space limitations related to the CATI methodology adopted in the study led to the omission of questions regarding alcohol acquired from abroad (e.g., traveller's taxfree imports, smuggling) or other sources, and questions on beer, the production or importation of which is anticipated to be negligible.

The Hungarian survey included questions about home production (and if so, total amount in litres) of spirits, wine and beer. Considering the total amount in litres of the three different types of home-made beverages, respondents were also asked how much the interviewee drank, how much his/her family drank and how much his/her friends and neighbours drank. It was also asked, how many litres the interviewees acquired from unrecorded/illegal commercial sources per types of alcoholic drinks, such as: home produced or bought from abroad by someone else (friend); from other non-official commercial sources (e.g. market, unregistered producer or place where it is possible to buy alcoholic drink without tax stamp). The interviewees were also asked about bringing any kind of alcoholic drinks from abroad for personal use, and if so, how many litres of alcoholic drinks were brought from abroad for personal use.

The Polish survey begins by asking if the interviewee had travelled to another country in the last 12 months. Just for those who had travelled, the next question was about how many times and how much spirits (e.g. vodka, gin, whisky, brandy) were brought by the interviewee from abroad. The same two questions were repeated about bringing back wine and beer. Then, the same structure of questions was asked about the acquisition of particular alcoholic beverages outside of the regular market (e.g. home made, smuggled, purchased directly from farmers or other producers and produced by yourself). For beverages acquired outside of the regular marker, questions were asked about how many litres were from abroad, were own home production, were home produced by somebody else or had other sources.

The Portuguese survey had a set of questions on how much alcohol (in litres, for spirits, wine and beer separately) the interviewee personally had acquired (e.g. brought from abroad, produced at home or gotten from a home producer and alike) in the past 12 months, a) from abroad (traveller's duty free imports), b) from aboard (other sources), c) own home production and d) home production of somebody else.

The Spanish survey included a set of five questions on unrecorded alcohol, dealing with a) alcoholic beverages brought from other countries (either tax-free imports or purchased and also acquired as a gift), b) alcoholic beverages that were craft production (either interiewee´s own production or another person´s craft production from where the interviewee could have purchased it or acquiring it as a gift) and c) alcohol coming from sources other than beverages (such as alcoholic contained in products for industrial or pharmaceutical use). All five questions were broken down into types of beverages (spirits, wine and beer) and the interviewee was requested to provide a figure (number of liters) for each if applicable. Finally, all questions used a last 12-months reference. Both Spanish surveys applied an identical set of questions.

Different ways of screening unrecorded alcohol acquisition had to be harmonized in order to produce comparable data. The immediate indicator was the percentage of people who had acquired home-made beverages or brought alcoholic beverages from abroad. Another approach is to calculate the volume of different alcoholic beverages that were acquired from unrecorded sources. Finally, this volume can be presented as a share of unrecorded consumption in the total alcohol consumption. All these indicators will be presented in the following sections of this chapter.

Results in the countries that collected unrecorded data in RARHA SEAS

The measurement of unrecorded alcoholic beverages is important, as it is one of the key components of alcohol consumption in many countries and because it is linked to the level of alcohol-related problems. (Moskalewicz et al. 2000; Rehm & Gmel 2008).

As already mentioned, of the twenty RARHA SEAS surveys, eight included a section on unrecorded alcohol as these questions were optional ones and probably in the remaining surveys it was seen as more feasible to give priority to other questions instead. The eight surveys that collected data on unrecorded alcohol acquisition gathered a sample of 11 885 respondents, where 1500 were from Croatia, 1500 from Finland, 1519 from Greece, 2005 from Hungary, 1555 from Poland, 1500 from Portugal, 1645 from Spain and 661 from Spain-Catalonia.

The following analysis reports weighted data from those surveys that had optional questions on unrecorded alcohol consumption. As can be seen from Table A3.5.1, the mean percentage of interviewees who had acquired unrecorded alcohol either from abroad or from domestic sources was almost 20%. The overall share of those who had acquired unrecorded alcohol was clearly above the average in Finland (41.8%) and in Greece (39.8%). It should be noted that Greece in fact did not ask about acquiring alcohol from abroad, only about wine and spirits from domestic sources. According to the survey results the sources were different in Finland and Greece.

Table A3.5.1. The share of those interviewees who had acquired unrecorded alcohol from foreign or domestic sources, per cent

	Total	From abroad	From domestic sources
Croatia	27.7	9.1	24.5
Finland	41.4	40.2	3.4
Greece	39.8	--	39.8
Hungary	11.2	6.3	5.3
Poland	10.6	7.0	4.9
Portugal	10.8	1.7	9.9
Spain*	4.4	2.4	2.2
Spain-Catalonia	8.5	3.9	5.4
AVERAGE	**19.3**	**10.1**	**11.9**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The main source in Greece was home production of spirits and wine and in Finland it was alcohol obtained through cross-border shopping. As in Greece, Croatia has a high percentage of those who had acquired unrecorded alcohol from domestic sources (24.1%). Countries such as Poland (10.6%), Portugal (10.7%) and Hungary (11.5%) had a smaller share of interviewees who reported that they had acquired unrecorded alcohol either from abroad or from domestic sources. In the case of Poland and Hungary, the main source was abroad, while in Portugal unrecorded alcohol was mainly acquired from domestic sources. The surveys from Spain had a bit lower proportions: 8.5% in Spain-Catalonia and 4.4% in Spain. In both surveys, proportions of unrecorded alcohol from abroad and from domestic surveys were about similar.

Table A3.5.2 gives the share of those interviewees who had acquired different kinds of alcoholic beverages, i.e. distilled spirits, wine and beer. The share of those who had acquired beer is smaller than that of spirits and wine. The share of those who had acquired beer is especially small from domestic sources. In Finland, where the share of interviewees who had acquired alcoholic beverages from abroad is clearly the largest, the share of those who had acquired spirits is the largest and those who had acquired beer is the lowest. In Greece, having only information about domestic sources, the percentage of interviewees who had acquired wine from domestic sources is higher than for spirits. Other figures to be regarded as high are the share of those who had acquire wine and spirits from domestic sources in Croatia, and the share of respondents who acquired wine from homemade production in Portugal.

Table A3.5.2. The share of those interviewees who had acquired unrecorded alcohol from foreign or domestic sources by beverage type, per cent

	Total			From abroad			From domestic sources		
	Spirits	Wine	Beer	Spirits	Wine	Beer	Spirits	Wine	Beer
Croatia	17.5	17.3	8.3	5.9	3.6	4.2	14.9	15.8	5.2
Finland	25.9	23.9	20.0	25.6	22.4	19.5	0.6	2.4	1.0
Greece	26.0	31.2	--	--	--	--	26.0	31.2	--
Hungary	3.3	5.5	3.2	3.0	4.0	2.9	3.4	3.2	0.4
Poland	7.0	4.8	5.0	4.2	3.8	3.9	3.7	1.3	1.4
Portugal	3.9	8.6	0.8	1.1	0.7	0.4	3.1	8.1	0.4
Spain*	2.7	1.7	0.8	1.7	0.6	0.6	1.2	1.1	0.2
Spain-Catalonia	4.8	4.2	1.2	2.3	2.1	0.5	3.0	2.1	0.9

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

As we can see in Table A3.5.3, the domestic supply of wine and/or spirits, especially in some Mediterranean countries reaches high volumes among persons who acquired unrecorded alcohol, suggesting significant consumption levels outside the regular market. Also relatively high volumes of beer from abroad among those who acquire unrecorded alcohol in Finland and Croatia suggest that also beer may represent a significant share in unrecorded consumption.

Table A3.5.3. Mean volume (in liters) of unrecorded alcohol per person reporting unrecorded alcohol

	Total			From abroad			From domestic source		
	Spirits	Wine	Beer	Spirits	Wine	Beer	Spirits	Wine	Beer
Croatia	6.49	34.87	32.72	2.91	4.82	34.45	6.47	37.09	24.49
Finland	4.57	11.30	44.94	4.48	9.58	45.06	5.68	23.51	19.09
Greece	13.59	68.15	--	--	--	--	13.59	68.15	--
Hungary	5.95	48.05	9.04	1.61	2.57	9.29	11.33	79.19	7.11

	Total			From abroad			From domestic source		
	Spirits	Wine	Beer	Spirits	Wine	Beer	Spirits	Wine	Beer
Poland	4.97	2.80	5.83	2.18	2.43	5.84	6.79	3.19	4.48
Portugal	9.30	207.19	1.91	1.74	1.33	1.63	11.09	222.12	2.30
Spain*	3.62	21.31	3.20	2.53	3.06	3.31	4.47	30.89	2.86
Spain-Catalonia	2.22	2.36	3.25	1.67	2.29	1.67	2.30	2.43	3.50

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

To estimate the role of unrecorded alcohol in overall consumption, we re-calculated volumes from Table A3.5.3 into 100% alcohol and calculated overall unrecorded alcohol per capita. As shown in Table A3.5.4 these figures vary from a small fraction of one litre in Spain and Poland to about half a litre in Hungary, over one litre in Croatia and Finland, to four litres in Greece. While comparing unrecorded alcohol with recorded consumption we found that the share of the former ranges from a few per cent in Spain, Poland and Hungary to a dozen or so per cent in Croatia and Finland and to over 50% in Greece.

Table A3.5.4. Unrecorded alcohol per respondent in litres of 100% alcohol and its percentage share in recorded alcohol consumption

	Estimated unrecorded per respondent, litres 100% alcohol	Share in recorded consumption, %
Croatia	1.35	11.1
Finland	1.26	14.3
Greece	4.06	53.8
Hungary	0.47	4.3
Poland	0.17	1.6
Portugal	2.38	24.1
Spain*	0.09	1.0
Spain-Catalonia	0.05	

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

How to study unrecorded alcohol consumption in Europe

Information about unrecorded alcohol consumption is necessary when developing comprehensive alcohol policies and monitoring alcohol-related behaviour and outcomes. Having taken into account many different sources and types of unrecorded alcohol and ways of asking about it, assessing its prevalence appears to be a complex problem.

We should start to provide better estimates of the size of the market and better measures of the level of consumption (Anderson & Baumberg, 2006). Since policy measures largely depend on the type of unrecorded alcohol, insight into country specific distributions of consumption between the categories of unrecorded alcohol is also required, as much as reliable consumption data over time.

As we saw earlier, the ways of asking about, and the ways of measuring, alcohol consumption differ between European countries, which can explain some differences in the amounts of unrecorded alcohol consumption. Summarising the experiences of RARHA SEAS it can be claimed that questions on prevalence of using unrecorded sources of alcohol work relatively well as an indication of the proportion of the population acquiring alcohol which is unrecorded by beverage type and comes from domestic sources and from abroad. Questions of volumes may be more biased depending on the legal status of unrecorded alcohol and its social perception. In some countries where unrecorded alcohol is legal and has a long tradition of use, its volumes may be reported in surveys more accurately while in others, where it is more stigmatised, substantial under-reporting may affect the data collected. Therefore, there is much to be done in this field, the more so because basic research is lacking in many European countries. A new wave of the RARHA SEAS study should adopt a core set of questions about unrecorded alcohol to assess the importance of different unrecorded alcohol items in different countries, and to produce a detailed plan for how the quantity of these items could be measured. Obtaining reliable estimates of unrecorded alcohol consumption poses a real challenge!

Key results for policy makers

In every country some of the alcohol consumed by the population falls outside the statistics. In countries with high alcohol taxes and prices, and practically no border control (like in the Nordic EU countries) travellers' alcohol imports are a crucial unrecorded item. In countries where there is hardly any alcohol control like in the Eastern European countries at the beginning of the transition period smuggling alcoholic beverages (and other illegal items) tended to be an important source of unrecorded alcohol. In vine-growing countries a major source of unrecorded consumption is domestic wine as well as domestic spirits made of wine such as aqua ardente, grappa or rakija.

Studying unrecorded alcohol consumption has become more important in recent years as for instance the World Health Organization has begun to publish alcohol consumption data for both recorded alcohol consumption and total alcohol consumption. Data on unrecorded alcohol consumption also helps individual governments to follow developments in the alcohol field and to plan alcohol control activities.

References:

Anderson, P., Baumberg, B. (2006). Alcohol in Europe.A public health perspective. London, Institute of Alcohol Studies (http://ec.europa.eu/health-eu/doc/alcoholineu_content_en.pdf, accessed 20 august 2016).

Cuesta, U., (2014). Informe sobre los hábitos de compra y consumo de alcohol en españa y sus efectos socio-sanitarios. Cátedra de Comunicación y Salud. Facultad de Ciencias de la Información. Universidad Complutense de Madrid.

Lachenmeier, D. W. (nd), "Unrecorded and illicit alcohol" (http://www.euro.who.int/__data/assets/pdf_file/0020/191360/2-Unrecorded-and-illicit-alcohol.pdf, accessed 20 august 2016).

Moskalewicz J, Wojtyniak B, Rabczenko B. (2000). *Alcohol as a cause of mortality in societies undergoing rapid transition on market economy*. In: Cornia GA, Panicia R. The mortality crisis in transitional economies New York: Oxford University press, p. 83–105.

Norstrom T, Editor (2001). Alcohol in postwar Europe: Consumption, drinking patterns, consequences and policy responses in 15 European countries. Stockholm: National Institute of Public Health. European Commission.

Rehm, J., Kailasapillai, S., Larsen, E.,. Rehm, M.X., Samokhvalov, A.V., Shield, K.D., Roerecke, M., Lachenmeier, D.W. (2014). A systematic review of the epidemiology of unrecorded alcohol consumption and the chemical composition of unrecorded alcohol. Addiction. Volume 109: 880–893.

Rehm, J. & Poznyak, V. (2015). *On monitoring unrecorded alcohol consumption*. Alcoholism and Drug Addiction. Volume 28, Issue 2, June 2015, p. 79–89.

Sordo, L., Barrio, G., Bravo, M.J., Villalbí, J.R., Albert Espelt A., Neira, M., Regidor, E., (2016). Estimating average alcohol consumption in the population using multiple sources: the case of Spain. Health Metrics 14:21.

WHO (2014). Global status report on alcohol and health 2014 (http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763_eng.pdf, accessed 10 august 2016).

A3.6 Individual harm

Carla Bruguera, Lidia Segura-Garcia and Joan Colom

Introduction

Some years ago, it was estimated that 58 million EU adults are heavy drinkers and 23 millions of those are dependent on alcohol (Anderson & Baumberg, 2006).

Despite the fact that standardized data is essential to be able to monitor alcohol attributable mortality and morbidity (Rehm, 2014), nowadays, there are still no robust estimations on the prevalence of alcohol related problems in Europe. The reasons for this gap are mainly the lack of consistency in the use of screening and diagnostic tools throughout Europe and the fact that alcohol consumption and alcohol related problems are highly stigmatized and therefore under-declared. When studying the distribution of alcohol consumption patterns and problems, it is important to have the ability to take into account the influencing role of factors such as age, gender, drinking cultures and socials norms at country level (Rehm et al. 2014; WHO, 2015; Rehm et al., 2015).

In order to address this gap, it was decided to include a section on individual harm focused on the assessment of alcohol related problems, alcohol abuse and alcohol dependence. After reviewing the most used tools, it was finally decided to include in the RARHA survey the Rapid Alcohol Problems Screen (RAPS) as a brief instrument for screening purposes (Cherpitel., 2000) and the Composite International Diagnostic Interview (CIDI) (Robins et al., 1989) as an "optional" diagnostic tool.

The RAPS consists of four simple questions indicating dependence symptoms with a total score ranging between 0 and 4. When used as a screening tool for alcohol dependence, at least one item has to be answered positively. In this survey, the original RAPS was extended by including questions on frequency of these symptoms.

The CIDI allows detecting both harmful drinkers and dependent drinkers according to DSM IV and ICD 10 criteria. In this survey, the CIDI questions included 16 items. During the survey implementation, emphasis was put on the need to adapt CIDI clinical questions to a survey context. For the purpose of this research, the two distinct categories (alcohol abuse and alcohol dependence) proposed by the DSM-IV on the CIDI scale were aggregated in order to adjust to the category "Alcohol use disorder" proposed by DSM-V.

Methods applied

Weighted percentages and averages are presented by survey in a descending order in figures and alphabetically in tables. Percentages, are presented in terms of percentages yes of the total sample and by gender and age. Gender ratios were also estimated for RAPS+1, RAPS+2 and percentage of alcohol abuse and/or dependence according to DSM criteria. Global results in tables and figures were calculated by estimating the average of each country's results.

For RAPS, prevalence of alcohol related problems was calculated both at threshold +1 and threshold +2. Items included on the RAPS scale are 'Have you had a feeling of guilt or remorse after drinking?', 'Have you had a friend or family member tell you about things you said or did while you were drinking that you did not remember?', 'Have you failed to do what was normally expected from you because of drinking?', 'Do you sometimes take a drink in the morning when you first get up?'.

Alcohol use disorders prevalence was calculated using items of the CIDI scale, following DSM IV criteria. The variable is a composite of the criteria for 'alcohol abuse' and 'alcohol dependence'. Affirmative answers in items 'drinking interfered with your work', 'get hurt', arrested because drunk driving' or 'drinking caused arguments' and 'drinking despite problems with other people' were re-categorized into 'alcohol abuse'. Three or more affirmative answers on the following items of the scale: 'increased tolerance', 'withdrawal symptoms', drinking to prevent withdrawal symptoms', 'Loss of control (LoC) – start to drink', 'LoC – drinking more frequently', 'LoC – become drunk', 'LoC – unable to stop', 'no time for anything else', 'reducing important activities' and 'drinking despite serious health problems' were re-categorized into 'alcohol dependence'.

Significance was assessed by using Chi-squared analysis where $P \leq 0.05$ was described as significant. Non-significant results are indicated in grey.

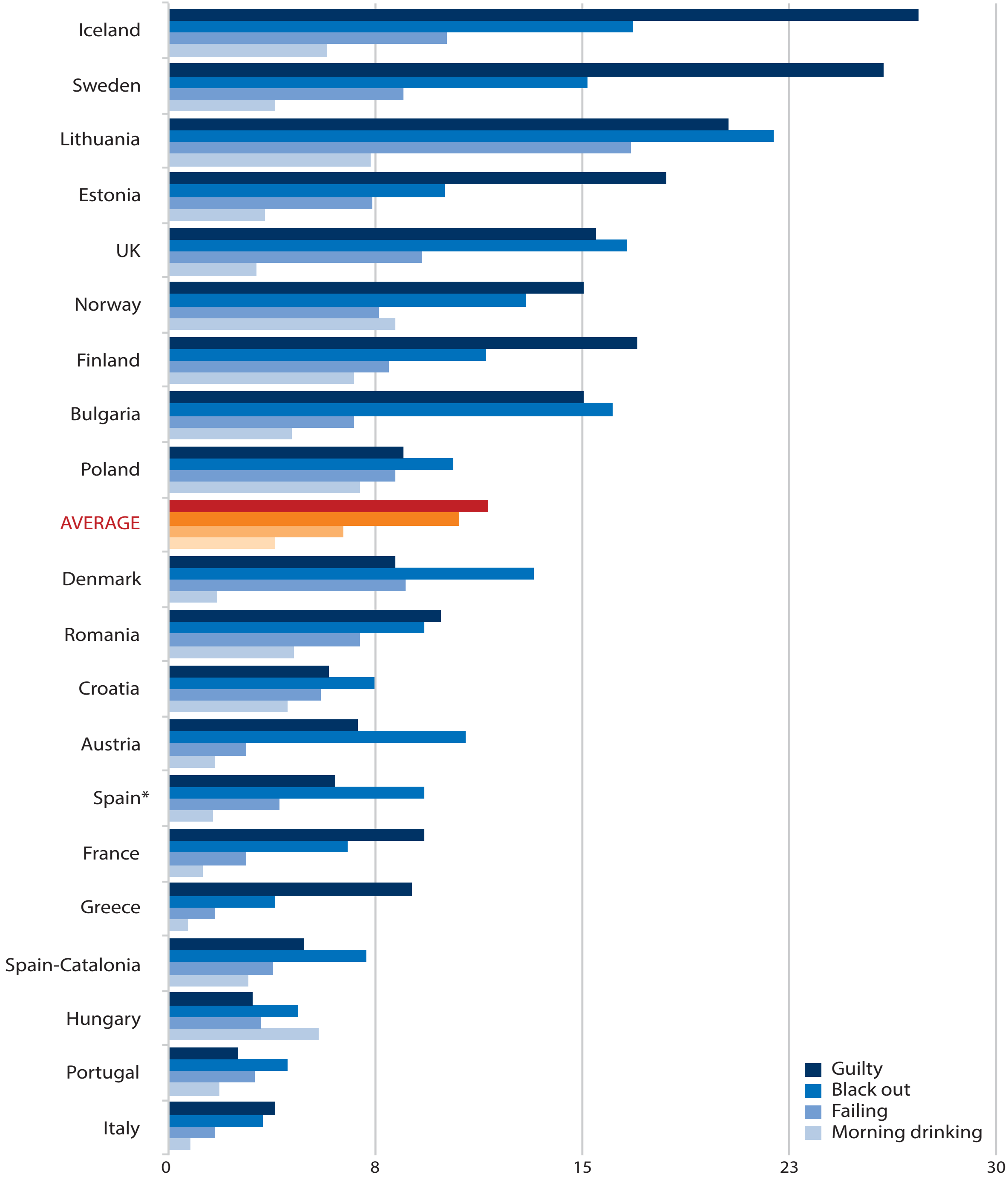
Results

Main results are presented in figures and tables for total RAPS and CIDI scores and for each instrument question.

RAPS

Figure A3.6.1 shows the distribution of answers to the four questions of RAPS scale for the total sample and each participating country. On average, feeling of guilt or remorse after drinking was more prevalent, followed by having been told something by other people that one did not remember and failing to do what was expected. Having a drink first thing in the morning was the least prevalent. However, there were pronounced differences between countries. For instance, feeling of guilt in Iceland almost reached 30% whereas in Italy it was under 5%.

Figure A3.6.1. RAPS questions (percentage 'yes')



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Results also revealed differences according to age and gender.

Feelings of guilt (Table A3.6.1) are higher among males reaching a difference of almost 6 percentage points with women. Prevalence was higher among young people (18 to 34 years old) and decreased in the other two age groups. Across countries, Iceland, Sweden and Lithuania, all from Northern Europe, registered the highest percentages, whereas Hungary, Italy and Portugal, all vine-growing countries, registered the lowest.

Table A3.6.1. Percentage 'yes' to the question 'Have you had a feeling of guilt or remorse after drinking?' by age and gender

Guilt	Total	Male	Female	18–34	35–49	50+
Austria	6.9	7.6	6.3	10.3	5.2	5.0
Bulgaria	15.1	18.0	12.2	13.2	15.4	16.7
Croatia	5.9	9.6	2.1	8.4	5.6	3.5
Denmark	8.3	8.6	7.9	13.8	6.8	5.4
Estonia	18.1	24.9	11.8	26.2	16.9	9.6
Finland	17.0	19.0	15.0	26.3	12.3	11.7
France	9.3	11.6	7.3	10.8	9.8	7.5
Greece	8.8	11.7	5.9	13.5	7.5	5.6
Hungary	3.1	3.8	2.2	*3.9*	*2.8*	*2.5*
Iceland	27.2	30.1	24.1	*38.7*	*25.4*	*13.7*
Italy	3.9	4.8	3.0	5.6	3.1	3.2
Lithuania	20.4	27.9	13.3	18.8	22.6	19.9
Norway	15.0	17.6	12.3	26.3	9.1	7.8
Poland	8.6	12.2	5.0	8.9	9.6	7.1
Portugal	2.6	4.5	0.9	*2.4*	*2.9*	*2.4*
Romania	9.9	15.8	4.1	10.4	9.3	9.9
Spain*	6.0	8.4	3.6	*7.3*	*6.6*	*3.8*
Spain-Catalonia	4.9	7.0	2.8	*7.1*	*4.5*	*3.3*
Sweden	25.9	28.9	23.1	33.8	22.3	20.3
UK	15.5	19.0	12.2	23.1	16.9	7.0
Average	**11.6**	**14.6**	**8.8**	**15.4**	**10.7**	**8.3**

Differences between figures in grey, not significant

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

As mentioned previously, on average, over 10% of population reported having experienced a blackout (Table A3.6.2). Across countries, Lithuania had the highest percentage, followed by Iceland and Bulgaria. At the other end were Greece, Hungary and Italy. There was also a difference of almost 8 percentage points between males and females. The difference in the cross-country average between the youngest group and the rest is remarkable, 8 percentage points higher than the group 35–56 years old and 11 points over the oldest.

Table A3.6.2. Percentage 'yes' to the question 'Have you had a friend or family member tell you about things you said or did while you were drinking that you did not remember?' by age and gender

Black out	Total	Male	Female	18–34	35–49	50+
Austria	10.8	13.9	7.7	19.3	8.2	4.2
Bulgaria	16.1	18.8	13.6	15.0	17.2	16.3
Croatia	7.5	12.2	2.9	13.5	5.1	3.4
Denmark	13.3	16.7	10.2	30.9	7.6	5.2
Estonia	10.1	16.6	4.0	16.2	8.3	4.4
Finland	11.5	16.1	6.9	21.5	6.7	5.7
France	6.5	8.4	4.8	13.5	3.8	2.7
Greece	3.9	5.7	2.1	7.7	3.2	0.9
Hungary	4.7	7.8	1.8	*6.5*	*4.0*	*3.8*
Iceland	16.9	20.9	12.8	27.9	13.4	5.6
Italy	3.5	4.8	2.1	8.5	1.4	1.3
Lithuania	21.9	31.1	13.6	20.8	24.5	20.7
Norway	12.9	16.1	9.5	25.8	6.4	4.6
Poland	10.4	15.5	5.4	13.3	10.0	7.3
Portugal	4.4	8.0	1.0	*6.1*	*3.7*	*3.2*
Romania	9.3	16.4	3.2	12.4	9.9	5.5
Spain*	9.3	12.3	6.4	14.4	8.5	4.5
Spain-Catalonia	7.2	9.7	4.7	12.1	6.7	2.7
Sweden	15.2	19.0	11.6	25.0	10.8	8.1
UK	16.6	21.4	12.0	27.1	15.6	7.2
Average	**10.6**	**14.6**	**6.8**	**16.9**	**8.7**	**5.9**

Differences between figures in grey, not significant

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The average share of the population who stated they had failed to do what was expected of them, was over 5% in the participating countries (Table A3.6.3). Lithuania was in the first position, followed by Iceland, whereas Austria, France and Greece showed percentages under 3%. Again, there was a considerable gap between males and females. Regarding age, prevalence was higher among younger participants in all countries, except Lithuania, Hungary and Portugal, in which those in the 35–49 age group had slightly higher prevalence rates.

Table A3.6.3. Percentage 'yes' to the question 'Have you failed to do what was normally expected from you because of drinking?' by age and gender

Failing	Total	Male	Female	18–34	35–49	50+
Austria	2.9	4.3	1.5	4.2	2.3	2.0
Bulgaria	6.7	8.2	5.2	5.1	6.5	8.7
Croatia	5.5	9.3	1.8	7.6	5.4	3.5
Denmark	8.6	11.7	5.9	13.6	5.2	7.8
Estonia	7.5	11.9	3.4	8.3	8.1	5.8
Finland	8.0	10.1	5.8	11.0	6.9	5.9
France	2.9	4.3	1.5	4.7	2.4	1.6
Greece	1.7	2.9	0.6	2.9	1.4	0.9
Hungary	3.4	5.9	0.8	*3.1*	*4.1*	*2.8*
Iceland	10.1	13.9	6.3	16.6	9.4	2.4
Italy	1.7	2.5	1.1	*2.9*	*1.4*	*1.1*
Lithuania	16.8	23.7	10.4	16.0	18.7	15.8
Norway	7.6	9.9	5.3	12.4	5.6	4.2
Poland	8.2	12.6	4.0	9.3	9.0	6.3
Portugal	3.1	5.9	0.7	*3.4*	*3.5*	*2.4*
Romania	7.0	12.1	2.0	10.5	5.9	4.2
Spain*	4.1	5.8	2.4	*5.9*	*3.5*	*2.7*
Spain-Catalonia	3.9	6.1	1.6	8.0	2.6	1.1
Sweden	8.5	10.7	6.3	13.3	5.5	6.0
UK	9.2	12.1	6.4	13.7	12.1	2.2
Average	**6.4**	**9.2**	**3.6**	**8.6**	**6.0**	**4.4**

Differences between figures in grey, not significant

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Regarding the item 'having a drink first thing in the morning', the global average was under 5% (Table A3.6.4). In general, Norway, Lithuania and Poland showed the highest prevalence rates, whereas France, Greece and Italy showed the lowest. Again, males presented higher prevalence than females and there was a negative trend associated with age, although the difference was mild. In a number of countries, however, prevalence of morning drinking increased with age, in particular in Bulgaria, Croatia and Hungary, as well as in Lithuania. It may suggest that in those countries morning drinking may constitute a remnant of a traditional cultural pattern and not only a symptom of problematic drinking.

Table A3.6.4. Percentage 'yes' to the question 'Do you sometimes take a drink in the morning when you first get up?' by age and gender

Morning drink	Total	Male	Female	18–34	35–49	50+
Austria	1.8	2.6	0.9	*2.4*	*1.1*	*1.8*
Bulgaria	4.5	6.0	3.1	3.1	5.0	5.5
Croatia	4.4	8.1	0.7	1.9	4.9	6.4
Denmark	1.8	2.9	0.9	3.8	0.8	1.2
Estonia	3.5	6.8	0.5	3.2	5.3	2.2
Finland	6.7	10.9	2.3	9.2	5.6	5.3
France	1.3	2.1	0.6	2.0	1.1	0.9
Greece	0.8	1.2	0.3	1.4	0.5	0.5
Hungary	5.5	8.9	2.1	3.3	4.4	8.9
Iceland	5.8	8.9	2.4	*7.6*	*5.6*	*3.6*
Italy	0.8	1.3	0.3	*1.0*	*0.8*	*0.6*
Lithuania	7.3	12.6	2.6	4.3	8.5	9.4
Norway	8.2	12.0	4.1	17.7	3.1	2.4
Poland	7.0	10.7	3.3	8.2	6.9	5.7
Portugal	1.9	3.2	0.5	*2.0*	*1.4*	*2.4*
Romania	4.6	8.4	1.3	7.8	5.1	0.6
Spain*	1.7	2.8	0.5	*2.5*	*1.6*	*0.9*
Spain-Catalonia	2.9	5.8	0.0	*4.0*	*3.0*	*1.6*
Sweden	3.9	6.7	1.2	6.5	2.9	1.9
UK	3.2	3.8	2.7	*4.9*	*3.2*	*1.7*
Average	**3.9**	**6.3**	**1.5**	**4.8**	**3.5**	**3.2**

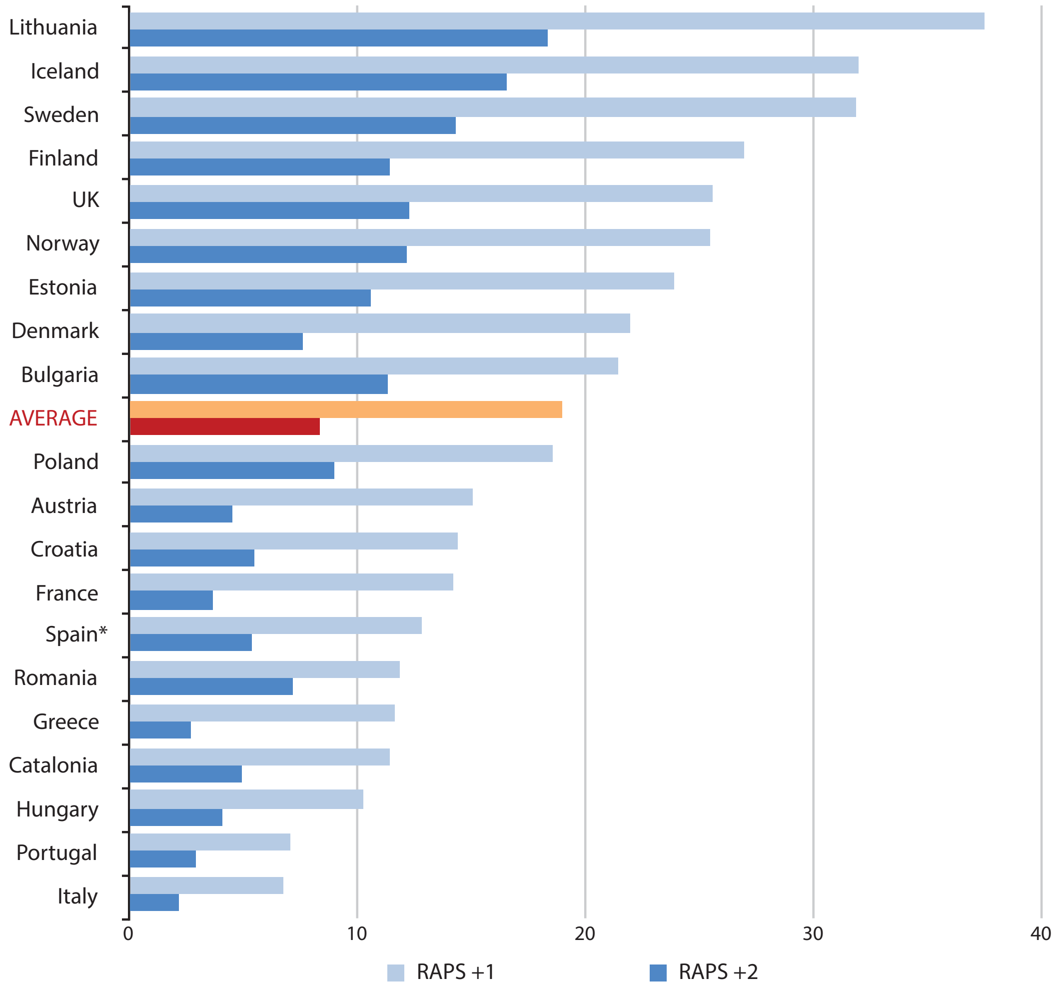
Differences between figures in grey, not significant

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

When using RAPS as a screening tool for alcohol related problems, at least one item has to be answered positively. With regard to this definition, a total of 19.1% were classified as having alcohol related problems, with country specific figures ranging from 37.5% in Lithuania down to 6.8% in Italy (Figure A3.6.2).

Figure A3.6.2 shows the prevalence for the RAPS scale (threshold 1+ and 2+) for the total sample and each participating country. Almost 10% of population answered positively to two questions on the RAPS scale. Lithuania, Iceland, Sweden add Finland, the UK, Norway and Estonia, all except the UK from Northern Europe, presented the highest prevalence of alcohol problems, whereas Italy and Portugal, as well as most of the wine-producing countries, had the lowest.

Figure A3.6.2. RAPS +1 and RAPS +2 (percentages)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Table A3.6.5 shows prevalences by age and gender for RAPS+1, reflecting the pattern revealed previously by RAPS questions. In this case males and young people registered the highest prevalence. In both cases there was a gap of about 10 percentage points with other groups. The gender ratio was also estimated and shows a gender gap in alcohol related problems. Countries with a higher ratio are Croatia, Portugal and Romania, where men are at least five times more likely to confirm RAPS symptoms, which may indicated deep gender differences in drinking patterns.

Table A3.6.5. RAPS +1 by age and gender

RAPS +1	Total	Male	Female	Gender ratio	18–34	35–49	50+
Austria	15.1	18.5	11.7	1.6	25.2	11.2	8.1
Bulgaria	21.5	25.6	17.4	1.5	*20.1*	*21.6*	*23.0*
Croatia	14.5	24.2	4.8	5.0	19.3	14.0	10.0
Denmark	22.0	27.1	17.5	1.5	40.0	15.1	14.8
Estonia	23.9	34.8	14.0	2.5	35.2	21.2	13.2
Finland	27.0	33.1	20.8	1.6	42.5	19.7	17.8
France	14.2	17.5	11.2	1.6	21.6	11.9	9.7
Greece	11.7	15.8	7.6	2.1	19.9	9.5	6.1
Hungary	10.3	16.0	4.8	3.3	*10.8*	*8.9*	*11.5*
Iceland	32.0	37.0	26.8	1.4	46.0	30.0	15.8
Italy	6.8	9.1	4.6	2.0	11.9	4.9	4.4
Lithuania	37.5	50.6	25.4	2.0	*37.0*	*40.0*	*35.7*
Norway	25.5	31.4	19.4	1.6	44.0	16.0	13.7
Poland	18.6	26.4	11.1	2.4	22.5	18.1	14.7
Portugal	7.1	12.2	2.2	5.5	9.5	6.6	5.0
Romania	11.9	22.1	3.9	5.7	*14.4*	*11.6*	*9.8*
Spain*	12.8	16.3	9.2	1.8	18.8	11.9	7.0
Spain-Catalonia	11.5	16.0	6.9	2.3	18.7	10.2	5.5
Sweden	31.9	37.3	26.8	1.4	43.5	25.3	24.8
UK	25.6	31.9	19.2	1.7	37.3	27.2	12.6
Average	**19.1**	**25.2**	**13.3**	**1.9**	**26.9**	**16.7**	**13.2**

Differences between figures in grey, not significant

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The prevalence of two positive responses to RAPS scale items follows a similar pattern. Males and people between 18 years old and 35 presented a higher prevalence than people in the other age groups (Table A3.6.6). The gender ratio was also estimated and shows an uneven gender gap in alcohol related problems across surveys. Portugal has the greatest gender ratio with men being 14 times more likely than women to experience 2 alcohol related problems. Romania has a ratio of 7.3 and Croatia, Greece, Hungary and Spain-Catalonia over 4, while the gender ratio is lower elsewhere.

Table A3.6.6. RAPS +2 by age and gender (percentages)

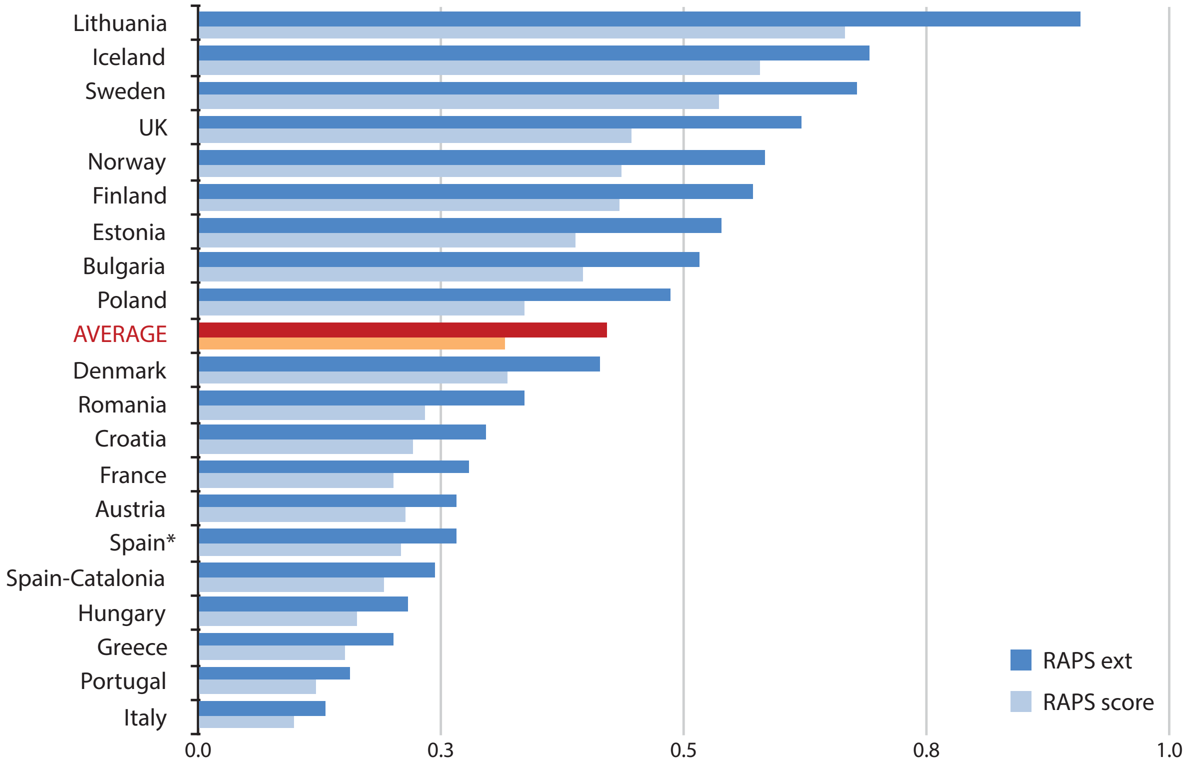
RAPS +2	Total	Male	Female	Gender ratio	18–34	35–49	50+
Austria	4.5	6.3	2.8	2.3	7.1	3.3	2.9
Bulgaria	11.3	14.0	8.7	1.6	9.3	11.7	13.2
Croatia	5.5	9.0	2.1	4.3	8.2	4.4	3.9
Denmark	7.7	9.5	6.0	1.6	16.0	4.3	4.4
Estonia	10.6	17.0	4.7	3.6	14.7	10.5	5.8
Finland	11.5	15.7	7.3	2.2	18.5	8.2	7.2
France	3.7	5.4	2.1	2.6	6.1	3.4	1.8
Greece	2.8	4.4	1.1	4.0	*4.1*	*2.8*	*1.4*
Hungary	4.1	6.7	1.6	4.2	3.6	4.3	4.4
Iceland	16.6	21.2	12.0	1.8	26.0	14.8	6.1
Italy	2.2	3.1	1.4	2.2	4.9	1.2	0.9
Lithuania	18.4	26.6	10.9	2.4	*15.8*	*21.4*	*18.3*
Norway	12.3	16.0	8.3	1.9	24.4	6.2	4.2
Poland	9.1	13.6	4.6	3.0	*9.7*	*9.7*	*7.7*
Portugal	2.9	5.6	0.4	14.0	*2.8*	*3.1*	*2.8*
Romania	7.2	13.8	1.9	7.3	*6.9*	*8.4*	*6.3*
Spain*	5.4	8.0	2.9	2.8	7.7	5.1	3.2
Spain-Catalonia	5.0	8.0	1.9	4.2	8.6	4.5	1.6
Sweden	14.3	17.8	11.0	1.6	23.0	10.5	7.9
UK	12.3	15.1	9.5	1.6	19.9	13.8	3.4
Average	**8.4**	**11.8**	**5.1**	**2.3**	**11.9**	**7.6**	**5.4**

Differences between figures in grey, not significant

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.6.3 shows for the total sample plus each country, average scores on the original RAPS and on the extended RAPS, which included additional questions on the frequency of symptoms. On average, countries scored 0.3 on the RAPS scale and 0.4 on the RAPS extended scale. Lithuania, Iceland and Sweden had the highest scores, whereas Greece, Italy and Portugal presented the lowest scores.

Figure A3.6.3. RAPS scores and RAPS extended (averages)



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Gender and age differences emerged again (Table A3.6.7). Males and young people presented the highest scores. Lithuania registered the greatest gap between males and females. In this case, on average, males scored double the score of females.

Table A3.6.7. RAPS score by age and gender (means)

Score	Total	Male	Female	18–34	35–49	50+
Austria	0.2	0.3	0.2	0.4	0.2	0.1
Bulgaria	0.4	0.5	0.3	0.3	0.4	0.4
Croatia	0.2	0.4	0.1	0.3	0.2	0.2
Denmark	0.3	0.4	0.3	0.6	0.2	0.2
Estonia	0.4	0.6	0.2	0.5	0.4	0.2
Finland	0.4	0.6	0.3	0.7	0.3	0.3
France	0.2	0.3	0.1	0.3	0.2	0.1
Greece	0.2	0.2	0.1	0.3	0.1	0.1
Hungary	0.2	0.3	0.1	0.2	0.2	0.2
Iceland	0.6	0.7	0.5	0.9	0.5	0.2
Italy	0.1	0.1	0.1	0.2	0.1	0.1
Lithuania	0.7	1.0	0.4	0.6	0.7	0.7
Norway	0.4	0.6	0.3	0.8	0.2	0.2
Poland	0.3	0.5	0.2	0.4	0.4	0.3
Portugal	0.1	0.2	0.0	0.1	0.1	0.1
Romania	0.2	0.4	0.1	0.3	0.3	0.2
Spain*	0.2	0.3	0.1	0.3	0.2	0.1
Spain-Catalonia	0.2	0.3	0.1	0.3	0.2	0.1
Sweden	0.5	0.7	0.4	0.8	0.4	0.4
UK	0.4	0.6	0.3	0.7	0.5	0.2
Average	**0.3**	**0.4**	**0.2**	**0.4**	**0.3**	**0.2**

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As expected, males and young people also presented higher scores when additional questions on symptoms were considered. Estonia, Finland, Iceland, Norway, Sweden and UK were the countries with higher scores among males and Sweden, Norway, Iceland and UK registered the highest prevalence among the youngest age group.

Table A3.6.8. RAPS extended by age and gender (means)

Extended	Total	Male	Female	18–34	35–49	50+
Austria	0.3	0.4	0.2	0.4	0.2	0.2
Bulgaria	0.5	0.6	0.4	0.4	0.5	0.6
Croatia	0.3	0.5	0.1	0.4	0.3	0.3
Denmark	0.4	0.5	0.3	0.8	0.3	0.3
Estonia	0.5	0.8	0.3	0.7	0.5	0.3
Finland	0.6	0.8	0.4	0.9	0.4	0.4
France	0.3	0.4	0.2	0.4	0.2	0.2
Greece	0.2	0.3	0.1	0.3	0.2	0.1
Hungary	0.2	0.4	0.1	0.2	0.2	0.2
Iceland	0.7	0.8	0.5	1.1	0.6	0.3
Italy	0.1	0.2	0.1	0.2	0.1	0.1
Lithuania	0.9	1.4	0.5	0.8	1.0	0.9
Norway	0.6	0.8	0.4	1.1	0.3	0.3
Poland	0.5	0.7	0.3	0.6	0.5	0.4
Portugal	0.2	0.3	0.0	0.2	0.2	0.2
Romania	0.3	0.6	0.1	0.4	0.4	0.3
Spain*	0.3	0.4	0.2	0.4	0.3	0.2
Spain-Catalonia	0.2	0.4	0.1	0.4	0.2	0.1
Sweden	0.7	0.8	0.5	1.0	0.5	0.5
UK	0.6	0.8	0.5	1.0	0.6	0.3
Average	**0.4**	**0.6**	**0.3**	**0.6**	**0.4**	**0.3**

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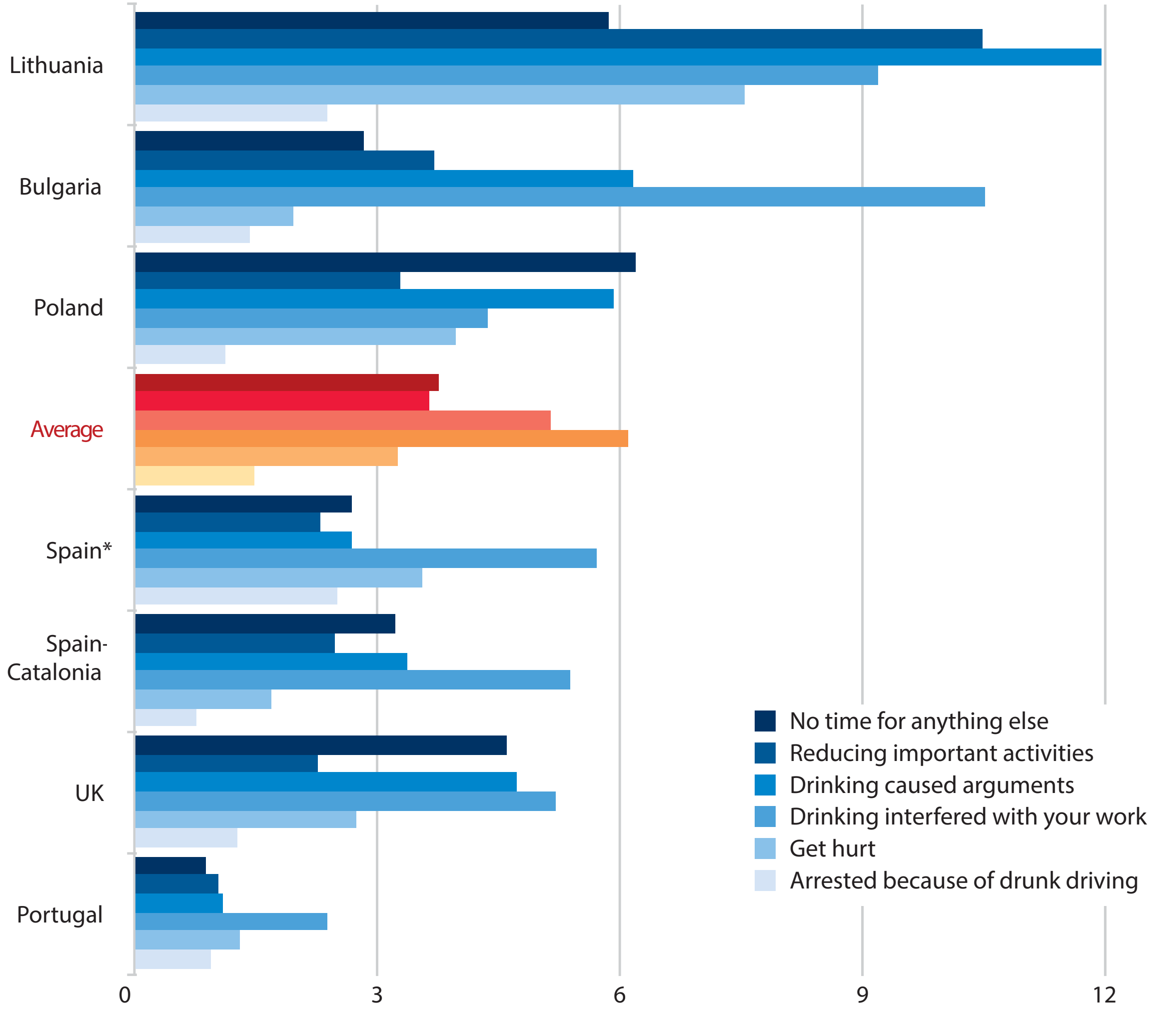
Since the CIDI instrument was optional, results are only presented for 7 out of the 20 jurisdictions that undertook the survey.

Figure A3.6.4 to 7 show the distribution of answers to the CIDI questions for the total sample and each participating country. Results have been grouped in four figures: individual consequences, physical dependence, loss of control and use despite problems.

Regarding individual consequences of alcohol consumption, drinking interfering with work was the consequence more often mentioned followed by drinking as a cause of arguments (Figure A3.6.4). Getting hurt and being arrested presented the lowest prevalence. Although percentages differed depending on the variable it seems, in general, Lithuania had the highest prevalence and Portugal the lowest.

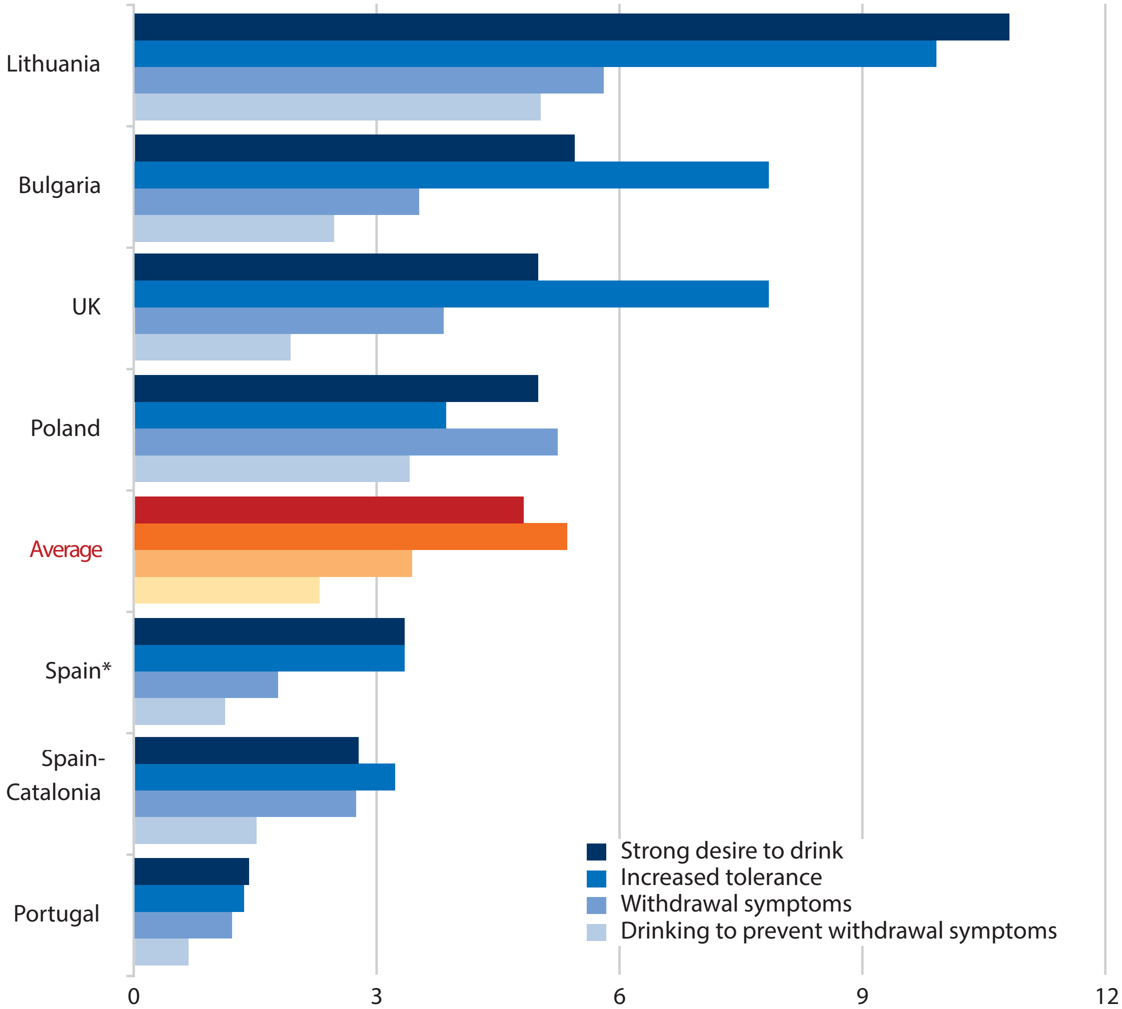
Figure A3.6.4. CIDI questions: individual consequences (percentage 'yes')



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Regarding physical dependence items (Figure A3.6.5), increased tolerance showed the highest prevalence and drinking to prevent withdrawal symptoms the lowest. However, percentages ranged from 2% to 5%. Although, here again, percentages differed depending on the variable, it seems that, in general, Lithuania, had the highest prevalence and Portugal the lowest.

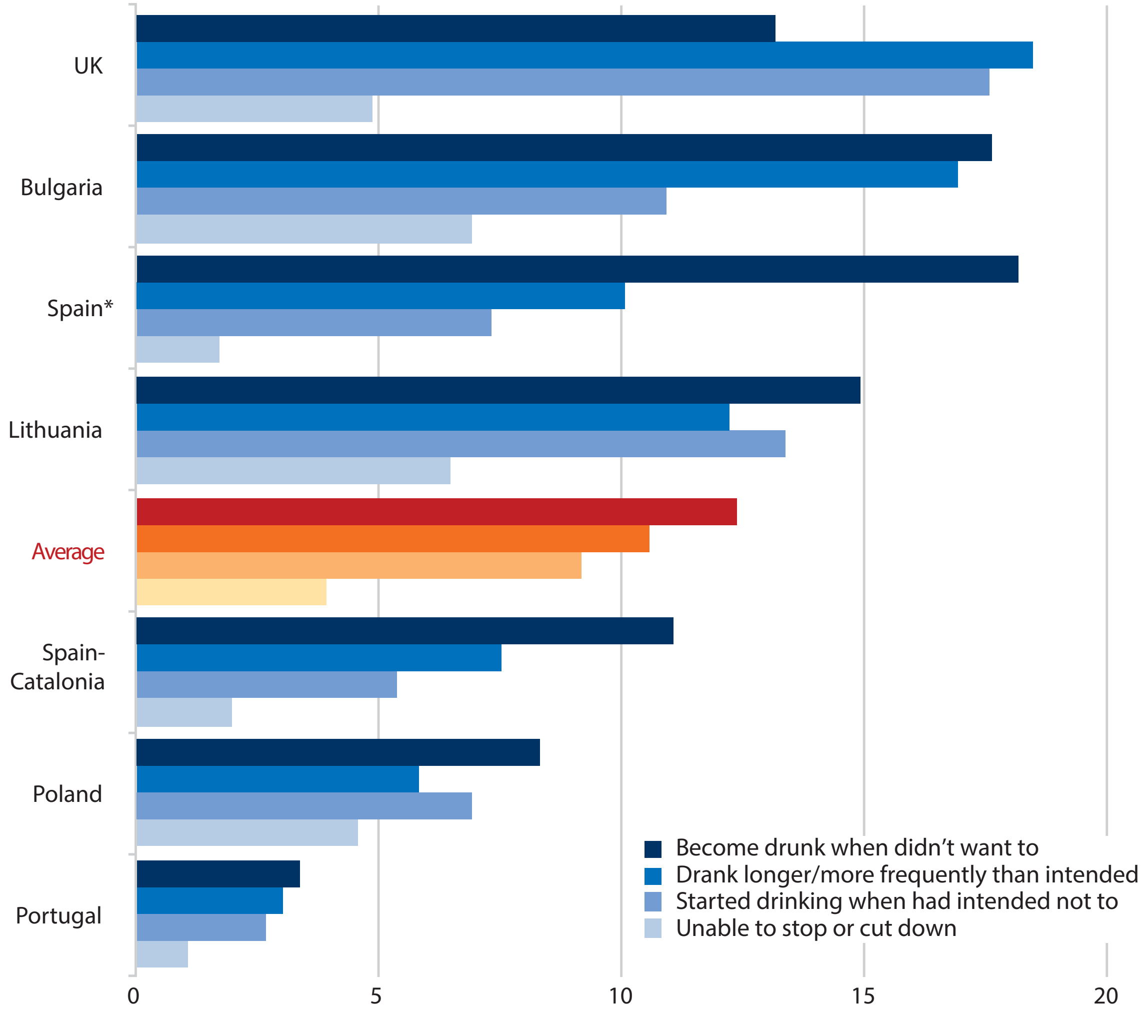
Figure A3.6.5. CIDI questions: physical dependence (percentage 'yes')



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Regarding items indicating loss of control (Figure A3.6.6), became drunk when didn't want to or drinking more when the respondent had intended not to generally registered the highest prevalence, and being unable to stop or cut down scored the lowest. Although percentatges differed depending on the variable it seems, the UK had the highest prevalence of items regarding loss of control and Portugal the lowest.

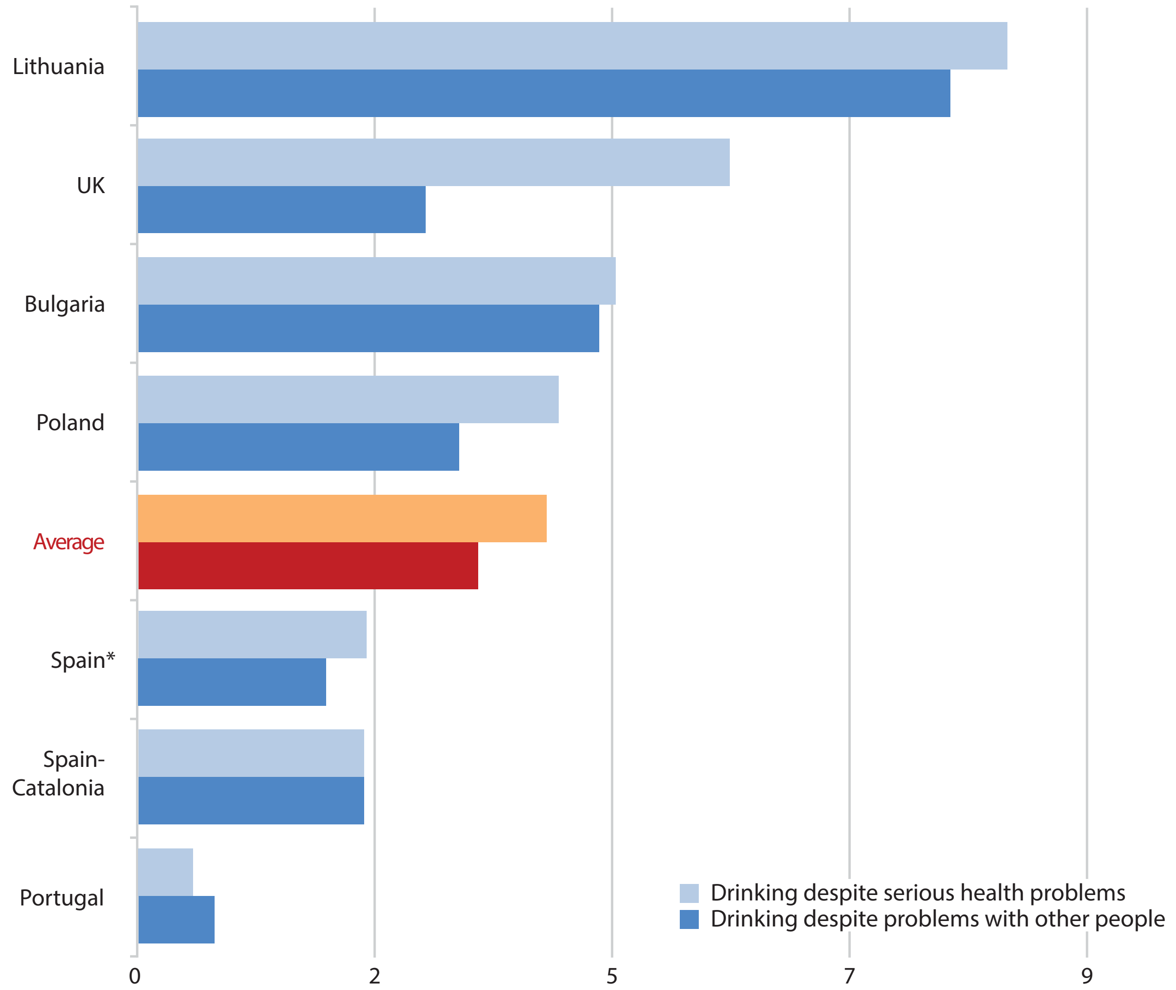
Figure A3.6.6. CIDI questions: loss of control (percentage 'yes')



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Regarding use despite problems, although both questions registered similar percentages, it seems drinking despite serious health problems was slightly more common than drinking despite problems with other people (Figure A3.6.7). Lithuania had the highest prevalence and Portugal the lowest on both issues.

Figure A3.6.7. CIDI questions: use despite problems (percentage 'yes')



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Taking them all together (Table A3.6.9), items with a higher prevalence were drank longer/ more frequently than intended and became drunk when didn't want to, whereas being arrested because of drunk driving and drinking to prevent withdrawal symptoms registered the lowest. Again, males had a significant higher prevalence on all items compared to women. In general young people report experiencing these issues more often than older people, although differences here don't seem so clear in comparison to previous questions.

Table A3.6.9. Percentage 'yes' to the CIDI questions by age and gender

		Total	Gender		Age		
			Male	Female	18–34	35–49	50+
Drinking interfered with your work	**Bulgaria**	10.5	12.4	8.7	11.0	9.3	11.2
	Lithuania	9.2	13.4	5.2	7.9	12.0	7.8
	Poland	4.4	6.1	2.7	5.2	5.2	2.6
	Portugal	2.4	4.4	0.5	*3.3*	*1.9*	*2.0*
	Spain*	5.7	8.2	3.3	8.5	5.5	2.7
	Spain-Catalonia	5.4	7.3	3.4	8.5	5.2	2.2
	UK	5.2	6.0	4.5	8.6	5.7	1.4
	Average	**6.1**	**8.3**	**4.0**	**7.6**	**6.4**	**4.3**
Drinking caused arguments	**Bulgaria**	6.2	7.0	5.4	5.8	5.6	7.3
	Lithuania	12.0	16.0	8.3	9.9	13.3	12.9
	Poland	5.9	7.8	4.1	7.0	6.3	4.3
	Portugal	1.1	1.4	0.8	*0.6*	*1.0*	*1.7*
	Spain*	2.7	4.2	1.3	*3.6*	*2.5*	*1.8*
	Spain-Catalonia	3.4	6.1	0.6	6.5	2.2	1.6
	UK	4.7	4.8	4.7	*7.2*	*4.1*	*2.8*
	Average	**5.1**	**6.8**	**3.6**	**5.8**	**5.0**	**4.6**
Drinking despite problems with other people	**Bulgaria**	4.4	*4.6*	*4.1*	*4.0*	*4.2*	*5.0*
	Lithuania	7.7	9.7	5.9	*5.3*	*9.3*	*8.8*
	Poland	3.1	4.6	1.5	*3.2*	*3.3*	*2.6*
	Portugal	0.7	1.3	0.3	*0.4*	*0.6*	*1.3*
	Spain*	1.8	2.8	0.8	1.5	2.4	1.4
	Spain-Catalonia	2.2	4.0	0.3	*4.0*	*1.1*	*1.6*
	UK	2.8	*3.4*	*1.9*	*3.2*	*3.5*	*1.7*
	Average	**3.2**	**4.3**	**2.1**	**3.1**	**3.5**	**3.2**

		Total	Gender		Age		
			Male	Female	18–34	35–49	50+
Drinking when risked getting hurt	**Bulgaria**	2.0	2.2	1.8	1.8	2.4	1.7
	Lithuania	7.5	11.9	3.5	6.9	8.1	7.6
	Poland	4.0	4.6	3.4	4.3	3.8	3.9
	Portugal	1.3	2.4	0.3	*1.6*	*1.0*	*1.3*
	Spain*	3.6	5.6	1.5	5.0	3.9	1.4
	Spain-Catalonia	1.7	2.7	0.6	3.0	1.9	0.0
	UK	2.8	3.0	2.5	6.0	1.0	1.1
	Average	**3.3**	**4.6**	**1.9**	**4.1**	**3.2**	**2.4**
Arrested because of drunk driving	**Bulgaria**	1.4	1.6	1.3	1.5	1.4	1.4
	Lithuania	2.4	4.7	0.3	2.6	2.9	1.6
	Poland	1.1	1.5	0.8	1.1	1.9	0.4
	Portugal	1.0	1.8	0.1	*0.8*	*0.8*	*1.3*
	Spain*	2.5	4.3	0.6	*2.9*	*2.7*	*1.8*
	Spain-Catalonia	0.8	0.9	0.6	*1.0*	*1.1*	*0.0*
	UK	1.3	2.8	0.0	2.9	0.3	0.6
	Average	**1.5**	**2.5**	**0.5**	**1.8**	**1.6**	**1.0**
Strong desire to drink	**Bulgaria**	5.5	6.2	4.7	3.5	6.1	7.0
	Lithuania	10.8	16.8	5.2	9.9	10.8	11.8
	Poland	5.0	6.7	3.4	5.4	4.7	4.9
	Portugal	1.4	2.5	0.3	*0.8*	*1.4*	*2.2*
	Spain*	3.4	5.0	1.8	*3.6*	*3.6*	*2.7*
	Spain-Catalonia	2.8	4.0	1.6	*3.0*	*3.7*	*1.1*
	UK	5.0	5.4	4.9	*6.3*	*5.8*	*3.1*
	Average	**4.8**	**6.7**	**3.1**	**4.6**	**5.2**	**4.7**

		Total	Gender		Age		
			Male	Female	18–34	35–49	50+
Increased tolerance	**Bulgaria**	7.9	8.8	6.9	6.9	8.7	8.0
	Lithuania	9.9	14.2	5.9	7.7	11.2	11.0
	Poland	3.9	5.3	2.5	5.2	3.8	2.5
	Portugal	1.4	2.8	0.1	*1.6*	*1.0*	*1.5*
	Spain*	3.4	4.2	2.5	*4.4*	*3.9*	*1.4*
	Spain-Catalonia	3.2	4.6	1.9	7.0	1.9	1.1
	UK	7.9	9.4	6.4	14.6	5.1	3.7
	Average	**5.4**	**7.0**	**3.7**	**6.8**	**5.1**	**4.2**
Withdrawal symptoms	**Bulgaria**	3.5	3.8	3.3	2.0	5.4	3.3
	Lithuania	5.8	8.9	2.8	4.9	7.0	5.6
	Poland	5.2	7.1	3.5	5.2	6.3	4.3
	Portugal	1.2	2.4	0.3	*0.8*	*1.4*	*1.5*
	Spain*	1.8	3.0	0.6	*1.0*	*2.7*	*1.6*
	Spain-Catalonia	2.8	4.5	0.9	*3.0*	*3.0*	*2.2*
	UK	3.8	4.6	3.1	*4.6*	*4.5*	*2.5*
	Total	**3.4**	**4.9**	**2.1**	**3.1**	**4.3**	**3.0**
Drinking to prevent withdrawal symptoms	**Bulgaria**	2.5	3.3	1.7	0.8	3.3	3.5
	Lithuania	5.0	7.7	2.6	3.6	6.4	5.2
	Poland	3.4	4.5	2.3	3.6	3.8	2.9
	Portugal	0.7	1.3	0.3	0.0	1.0	1.1
	Spain*	1.1	1.9	0.4	*1.1*	*0.9*	*1.4*
	Spain-Catalonia	1.5	3.0	0.0	*2.5*	*0.7*	*1.6*
	UK	2.0	1.8	2.1	*1.1*	*3.2*	*1.7*
	Average	**2.3**	**3.4**	**1.3**	**1.8**	**2.8**	**2.5**

		Total	Gender		Age		
			Male	Female	18–34	35–49	50+
Started drinking when had intended not to	**Bulgaria**	10.9	12.6	9.3	10.2	10.4	12.3
	Lithuania	13.4	17.1	10.0	12.4	13.9	14.1
	Poland	6.9	10.1	3.9	8.6	6.9	5.1
	Portugal	2.7	4.6	0.9	*3.4*	*2.3*	*2.4*
	Spain*	7.4	9.8	4.9	*8.4*	*7.6*	*5.9*
	Spain-Catalonia	5.4	7.9	2.8	8.5	5.2	2.2
	UK	17.6	19.0	16.2	22.1	19.1	11.9
	Average	**9.2**	**11.6**	**6.9**	**10.5**	**9.3**	**7.7**
Drank longer/ more frequently than intended	**Bulgaria**	17.0	19.3	14.7	16.3	17.5	17.1
	Lithuania	12.2	18.7	6.1	10.5	14.7	11.6
	Poland	5.8	8.5	3.2	7.0	5.7	4.7
	Portugal	3.1	5.1	1.1	3.7	2.5	3.0
	Spain*	10.1	14.0	6.2	13.9	9.1	7.0
	Spain-Catalonia	7.5	10.6	4.4	12.1	7.0	3.3
	UK	18.5	20.4	16.5	22.3	19.3	14.1
	Average	**10.6**	**13.8**	**7.5**	**12.3**	**10.8**	**8.7**
Become drunk when didn't want to	**Bulgaria**	17.6	20.1	15.2	16.5	18.1	18.3
	Lithuania	14.9	21.5	8.7	14.4	17.0	13.4
	Poland	8.3	13.1	3.8	9.3	9.2	6.4
	Portugal	3.4	5.3	1.6	*5.3*	*2.3*	*2.6*
	Spain*	18.2	23.0	13.3	30.2	17.0	5.9
	Spain-Catalonia	11.1	15.3	6.9	20.7	10.0	2.2
	UK	13.2	15.7	10.8	*22.9*	*12.1*	*4.7*
	Average	**12.4**	**16.3**	**8.6**	**17.0**	**12.2**	**7.6**

		Total	Gender		Age		
			Male	Female	18–34	35–49	50+
Unable to stop or cut down	**Bulgaria**	6.9	8.5	5.4	4.9	7.9	8.1
	Lithuania	6.5	9.8	3.5	4.9	8.1	6.6
	Poland	4.6	6.7	2.6	5.6	3.8	4.3
	Portugal	1.1	1.5	0.7	0.6	0.8	1.9
	Spain*	1.8	2.5	1.1	*1.3*	*2.2*	*1.6*
	Spain-Catalonia	2.0	3.3	0.6	*1.5*	*3.0*	*1.1*
	UK	4.9	4.4	5.3	6.9	3.2	4.5
	Average	**4.0**	**5.2**	**2.7**	**3.7**	**4.1**	**4.0**
Drinking left no time for anything else	**Bulgaria**	2.8	3.9	1.8	2.2	3.2	3.0
	Lithuania	5.9	9.6	2.4	4.5	7.7	5.6
	Poland	6.2	8.0	4.4	8.3	6.1	3.9
	Portugal	0.9	1.8	0.0	*1.0*	*0.4*	*1.3*
	Spain*	2.7	3.7	1.6	*3.0*	*2.8*	*2.0*
	Spain-Catalonia	3.2	5.5	0.9	5.5	2.6	1.6
	UK	4.6	6.0	3.3	8.3	5.1	0.6
	Average	**3.8**	**5.5**	**2.1**	**4.7**	**4.0**	**2.6**
Gave up important activities for drinking	**Bulgaria**	3.7	4.8	2.7	2.8	3.3	5.2
	Lithuania	10.5	15.0	6.1	9.8	11.4	10.4
	Poland	3.3	4.8	1.8	3.9	3.4	2.5
	Portugal	1.0	1.8	0.3	*0.6*	*1.2*	*1.3*
	Spain*	2.3	3.7	0.9	*3.0*	*1.7*	*2.3*
	Spain-Catalonia	2.5	4.2	0.6	4.5	1.5	1.6
	UK	2.3	3.0	1.6	1.1	4.8	1.1
	Average	**3.7**	**5.3**	**2.0**	**3.7**	**3.9**	**3.5**

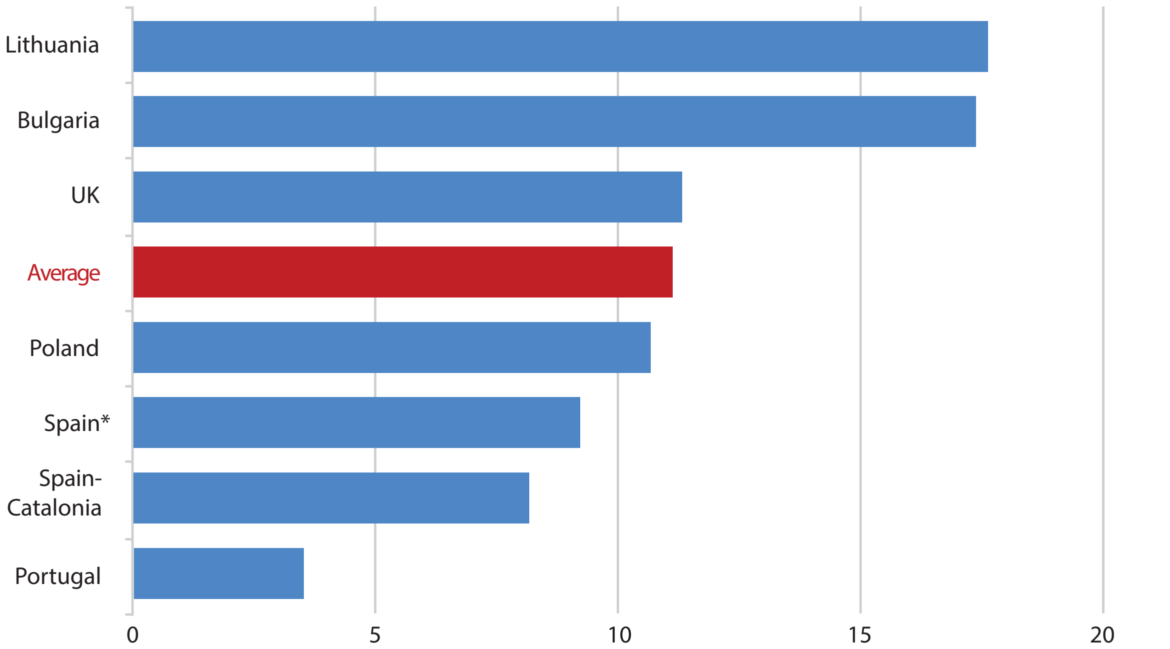
		Total	Gender		Age		
			Male	Female	18–34	35–49	50+
Drinking despite serious health problems	**Bulgaria**	4.5	5.4	3.7	3.4	4.2	6.2
	Lithuania	8.3	13.6	3.3	5.8	8.9	10.2
	Poland	4.0	5.6	2.5	3.6	5.0	3.5
	Portugal	0.5	0.7	0.4	*0.2*	*0.4*	*1.1*
	Spain*	2.2	3.1	1.3	*1.9*	*3.0*	*1.4*
	Spain-Catalonia	2.2	4.0	0.3	*2.0*	*2.6*	*1.6*
	UK	5.6	5.2	5.8	5.5	8.9	2.8
	Average	**3.9**	**5.4**	**2.5**	**3.2**	**4.7**	**3.8**

Differences between figures in grey, not significant

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.6.8 shows the prevalence of alcohol use disorders according to DSM criteria for the total sample and each survey. The average for surveys, in which CIDI section was included shows that over 10% of population presented alcohol use disorders. Lithuania and Bulgaria had the highest prevalence whereas Spain-Catalonia and Portugal had the lowest.

Figure A3.6.8. Percentage of alcohol use disorders according to DSM-V criteria



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Finally alcohol use disorders also presented differences according to gender and age (Table A3.6.10). As in other cases, males and younger participants registered higher prevalences, although gender seems a more relevant factor than age. Gender ratios show a clear gender gap in alcohol use disorders, especially for Portugal where men are 6.2 times more likely to develop an alcohol use disorders involving abuse and/or dependence. However, the low number of positive cases (male N=41; female N=8) has to be taken into account.

Table A3.6.10. Percentage of alcohol use disorders according to DSM criteria by age and gender

	Total	Male	Female	Gender ratio	18–34	35–49	50+
Bulgaria	17.4	20.5	14.4	1.4	*17.0*	*17.0*	*18.3*
Lithuania	17.6	25.9	10.0	2.6	*15.6*	*20.1*	*17.5*
Poland	10.7	14.2	7.2	2.0	*11.7*	*11.1*	*9.1*
Portugal	3.5	6.2	1.0	6.2	*4.9*	*2.9*	*2.8*
Spain*	9.2	13.9	4.5	3.1	13.2	9.1	4.6
Spain-Catalonia	8.2	11.4	4.9	2.3	15.0	7.2	2.2
UK	11.3	14.1	8.6	1.6	18.2	11.9	4.1
Average	**11.1**	**15.2**	**7.2**	**2.1**	**13.7**	**11.3**	**8.4**

Differences between figures in grey, not significant

Conclusions

Almost 1 in 5 participants experienced an alcohol related problem according to the RAPS scale, and almost 1 in 10 experienced two problems. On the RAPS scale, the most common issue was feeling guilt, followed by having experienced a blackout after drinking, failing to do what was expected and morning drinking in the last place.

Over 10% of the sample presented alcohol use disorders according to DSM criteria. However, this is the average, in which the CIDI scale was included –Lithuania, Bulgaria, the UK, Poland, Spain, Spain-Catalonia and Portugal.

Items on the CIDI scale more frequently mentioned were associated with loss of control. Started drinking, when had intended not to, drank longer/more are the items most commonly experienced.

Regarding country differences a clear pattern emerges. In general, northern countries such as Iceland, Sweden and Lithuania have a higher prevalence of alcohol problems as measured with RAPS and CIDI, compared to Southern countries like Portugal, Italy and Greece.

There are also strong gender differences and males are those that suffer more alcohol related problems as well as disorders. Estimated gender ratios showed a considerable gap for all variables. However experiencing 2 or more alcohol related problems registered the higher ratios. Differences across countries were observed also in gender differences.

Finally, and as expected according to the literature review, there are differences according to age. Young participants' prevalence was higher in alcohol related problems, especially one problem. Results also indicate a higher prevalence of alcohol use disorders according DSM-V criteria. In this case, however, results are not so clear, as significant results were not reported for all countries.

References

Anderson, P. & Baumberg, B. (2006) Alcohol in Europe. London: Institute of Alcohol Studies. (http://www.ias.org.uk/uploads/alcohol_europe.pdf).

Cherpitel, C.J. (2000). A brief screening instrument for alcohol dependence in the emergency room: The RAPS 4. Journal of Studies on Alcohol, 61, 447–449. (http://pubs.niaaa.nih.gov/publications/AssessingAlcohol/InstrumentPDFs/54_RAPS4.pdf).

Rehm J., Anderson P., Barry J., Dimitrov P., Elekes Z., Feijão F., Frick U., Gual A., Gmel G., Kraus L., Marmet S., Raninen J., Rehm M., Scafato E., Shield K., Trapencieris M., Gmel G. (2014). Alcohol use and dependence. In: Marmet, S., Gmel, G. & Rehm, J. (Eds.) (2014). Prevalence of substance use, dependence and problematic gambling in Europe. Addictions and Lifestyles in Contemporary Europe: Reframing Addictions Project (ALICE RAP): Deliverable 5.1.

Rehm J., Anderson P., Barry J., Dimitrov P., Elekes Z., Feijão F., Frick U., Gual A., Gmel G., Kraus L., Marmet S., Raninen J., Rehm M., Scafato E., Shield K., Trapencieris M., Gmel G. (2015). Prevalence and potential influencing factors of alcohol dependence in Europe. European Addiction Research, 21(1), 6–18.

World Health Organization (2005) Gender, Health and Alcohol Use. (http://www.who.int/gender-equity-rights/knowledge/alcoholfinal.pdf?ua=1).

Robins, L.N., Wing, J., Wittchen, H.-U., Helzer, J.E., Babor, T.F., Burke, J., Farmer, A., Jablensky, A., Pickens, R., Regier, D.A., Sartorius, N. & Towle, L.H. (1989). The Composite International Diagnostic Interview: An epidemiologic instrument suitable for use in conjunction with different diagnostic systems and in different cultures. Archives of General Psychiatry, 45, 1069–1077. (see: http://pubs.niaaa.nih.gov/publications/AssessingAlcohol/InstrumentPDFs/20_CIDI.pdf).

3.7 Harm from others' drinking

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Introduction

Until recently, work on harms from alcohol to someone other than the drinker focused primarily on drink driving (Horwood and Fergusson, 2000), foetal alcohol syndrome (Gilbert, 1996) and violence in public space (McMurran, 1999). However there has been increasing recognition of the wider range of harms experienced by someone other than the drinker (Laslett et al., 2011) including physical, mental, emotional and environmental types of harms. The importance of harm to others in European alcohol research has been recognised.

Work on harm to others in Europe is increasing. Young people and heavy drinkers are among those most likely to experience harm from other drinkers in Denmark (Seid et al., 2015). The role of harm to others in the debate surrounding minimum pricing in the UK has been recognised (Wood et al., 2014). While there has been some cross-national work in Europe, this has been limited to the regions of Europe, such as the Nordic countries and Scotland (Ramstedt et al., 2015), where drinking patterns are more homogeneous than they are across Europe as a whole. The aim of the current chapter is to investigate how harms from others' drinking are experienced across countries and regions from the whole of Europe.

Methods

Questions on harm from others' drinking

The questionnaire included three sections of items concerning harm from others' drinking. The first section included items that relate to harm from a known heavy drinker that could derive from five different types of relationships with the drinker. In this section, respondents were asked 'Thinking about the past 12 months, do you know someone who you consider to be a fairly heavy drinker or who drinks a lot sometimes?' Respondents were then given five categories to indicate their relationship to the heavy drinkers: i) a household member, ii) a family member or relative not living in their household (including ex-partners), iii) a work or school mate, iv) a neighbour and v) another friend or acquaintance. For each nominated relationship type, respondents were asked whether they were negatively affected 'a lot', 'a little' or 'not at all' by the heavy drinker(s).

The second section of questions on harms experienced due to others' alcohol drinking drew on items that relate to eight different specific harms. Respondents were asked 'In the past 12 months because of someone else's drinking have you': i) 'been woken up at night?', ii) 'been verbally abused?', iii) 'been harmed physically?', iv) 'been involved in a serious argument?', v) 'been a passenger with a driver who had had too much to drink?', vi) 'been involved in a traffic accident?', vii) 'felt unsafe in public places, including public transportation?', and viii) 'been annoyed by people vomiting, urinating, or littering?'. For each harm item, respondents who answered 'yes' to experiencing harm were asked whether they were negatively affected 'a lot', 'a little' or 'not at all' by the experience, and whether the person(s) responsible for the harm was 'someone you know', 'someone you do not know' or 'both'.

The third section of items in the questionnaire aimed to assess harm from others' drinking during childhood. The respondents were asked if they, as a child or teenager, lived with someone whom they considered to be a fairly heavy drinker or someone who drank a lot. Then, those who reported living with a fairly heavy drinker during childhood and/or adolescence were asked how much they were negatively affected by this or these persons' drinking (a lot/a little/or not affected at all).

Measures

Overview of alcohol-related harm

To gauge the overall prevalence of alcohol-related harm (Figure A3.7.1), dichotomous variables were created for experience in the last 12 months of any harm because of known people's drinking, for harm because of strangers' drinking, and for harm from any other's drinking, regardless of whether it was someone known or a stranger.. Respondents were coded as 'yes' to experiencing *any harm from any other's drinking* (Figure A3.7.1) if they reported (a) experiencing any of the eight specific harm items, or (b) reported being harmed 'a little' or 'a lot' by any known heavy drinker.

Similarly, respondents were coded as 'yes' to experiencing *any harm from a known person's drinking* (Figure A3.7.1 and A3.7.2) if they reported (a) experiencing any of the eight harm items as a result of a known person's drinking, or (b) reported being harmed 'a little' or 'a lot' by any known heavy drinker. For both variables, respondents who reported no to (a) but were missing on (b), or reported no to (b) but were missing on (a), were coded as missing data because it was not certain that these people were not harmed.

Respondents were coded as 'yes' to experiencing any *harm from a stranger's drinking* (Figure A3.7.1 and A3.7.3) if they reported experiencing any of the eight specific harm items as a result of a strangers' drinking. Respondents who did not answer yes to experiencing any of the eight harm items, but were missing on three or more of the items were coded as missing for harm from strangers' drinking because it was not possible to determine if these people had not been harmed.

For variables derived from the eight specific harms items to estimate prevalence of harm from the drinking of anyone else (either known or strangers), known people, and strangers, respondents who were missing on three or more of the eight items were coded as missing.

Relationships with known heavy drinkers and harm from their drinking

Analyses of relationships with known heavy drinkers and harm from alcohol draw on the survey items that relate to the five different types of relationships with the drinker described above (see the section: Questions on harm from others' drinking). Dichotomized variables were created including participants who had experienced: i) harm from each of the five specified relationship types, i.e. those who reported having been 'affected a lot' or 'affected a little' for each item (Table A3.7.2), ii) those who reported being affected 'a lot' (Figure A3.7.4 and Table A3.7.3), iii) family harm, i.e. harm from a household member and/or a family member or relative not in the household (Figure A3.7.5), and iv) harm from a non-family member or relative, i.e. work or school mate and/or neighbour and/or other friend or acquaintance (Figure A3.7.6). Percentages shown for each category of harm are on a base of the total in the national sample or for that gender, minus any for whom there should have been an answer but there was none.

Generally, the variables concerning relationships with heavy drinkers and harm from alcohol contained few missing cases although it is noted alongside the presented results where the missing cases were more than five per cent of the sample.

It should be noted that the Swedish questionnaire differed to some degree; after identifying respondents who knew a fairly heavy drinker, the Swedish respondents were first asked 'Did that/those person(s) drinking negatively affect you in some way during the last 12 months?'. Secondly, those who answered 'yes' further reported what relationship type they had to the person(s) whose drinking had harmed them, and finally they reported if they were affected 'a lot' or 'a little'. It is possible that this difference partly explains the low figure for Sweden on this question, as the possibility to report being harmed is only given once compared with five times as the question was asked in other countries.

Eight specific types of harm from others' drinking

Analyses of the types of harms experienced due to others' alcohol drinking draw on the survey items that relate to the eight specific harms described above (see the section: Questions on harm from others' drinking). It should be noted that harm from known heavy drinker(s) are not included in the results in this section.

Dichotomized variables were created including participants who had experienced: i) either 'a lot' or 'a little' harm from each of the eight specific harms (Table A3.7.4), ii) each type of harm 'a lot' (Table A3.7.5), iii) summary variables across the 8 items for any harm (Table A3.7.4 & Figure A3.7.8), and for any harm 'a lot' from at least one specific harm (Table A3.7.5). In addition, based on results of multiple correspondence analyses (MCAs) separately on each survey's data,

the eight harm items were split into two groups with items that share similar properties. One group contained four items that pertain to 'less serious' harms: 'woken at night', 'verbally abused', 'felt unsafe in public places', and 'annoyed by vomit, urine or litter'. The other group contained four items that pertain to harms which seem at face value more serious: 'harmed physically', 'in a serious argument', 'passenger with a drunk-driver' and 'in a traffic accident' (Figure A3.7.7 and A3.7.10). At the country level, this two-group split was supported in the MCAs in approximately half of the country-level samples.
Drawing on information from the eight types of harm items, two harm scores were created, one for harm from strangers, and one for harm from known people (both are used in Tables A3.7.6 and A3.7.7), which are used in this chapter to estimate the amount of harm experienced because of others' drinking in the last 12 months. The harm score for each item is assigned according to the average scores assigned on a score from 0 to 10 by respondents in a Swedish study answering 'a little' and 'a lot' in a separate question on how much they were harmed (see Table A3.7.1; (Ramstedt et al., 2014).

Table A3.7.1. Mean harm score (range 1–10) from known people's drinking and from stranger's drinking according to the reported severity of negative effects

Reported severity of negative effects	Mean harm score
Harm from known people's drinking	
A little	2.9
A lot	8.0
Harm from strangers' drinking	
A little	2.8
A lot	7.8

Estimates from (Ramstedt et al., 2014).

Alcohol-related harm during childhood
The measures of living with a fairly heavy drinker during childhood or teenage years stem from the questions mentioned above (see the section: Questions on harm from others' drinking). Two variables were created including participants who: i) had lived with a fairly heavy drinker during childhood, and ii) whether those who had were negatively affected by the drinking 'a lot', 'a little', or not at all. Figure A3.7.10 shows those who were affected "a lot", who were affected "a little", and who were living in their youth with a fairly heavy drinker but were not adversely affected by it. Table A3.7.8 shows the proportions adversely affected "a lot" by gender and current age groups.

Analyses
Data analysis was conducted with Stata version 14 (Stata Corp, 2015) and IBM SPSS Statistics version 22. All counts presented are raw Ns and, for country data where survey weights are applicable and available, percentages and correlations are based on weighted data. Effect estimates encompassing data from multiple countries are given as the mean of individual country estimates. Thus, estimates are weighted equally in any combined index, irrespective of the population or sample size of each country. Instances where large numbers of missing data are present – at least 5% of the sample – will be noted alongside the relevant results.

For the purpose of interpretation and discussion, countries are grouped to allow for regional comparisons. Anderson and colleagues (World Health Organization, 2012) consider the economic power of countries, their history, average volume of consumption, drinking patterns and social reactions to alcohol, to classify European countries into four regions: Central-Eastern and Eastern Europe (including Bulgaria, Croatia, Estonia, Hungary, Lithuania, Poland and Romania, among others), Central-Western and Western Europe (including Austria, France and United Kingdom), Nordic countries (including Denmark, Finland, Iceland, Norway and Sweden) and Southern Europe (Greece, Italy, Portugal and Spain, including Spain-Catalonia[1]). For some countries, a case can be argued that they fit into more than one of the aforementioned regions. For example, France is classified as a Central-Western and Western Europe country, however, due to its strong wine culture many would argue France could be considered a Southern European nation.

Results

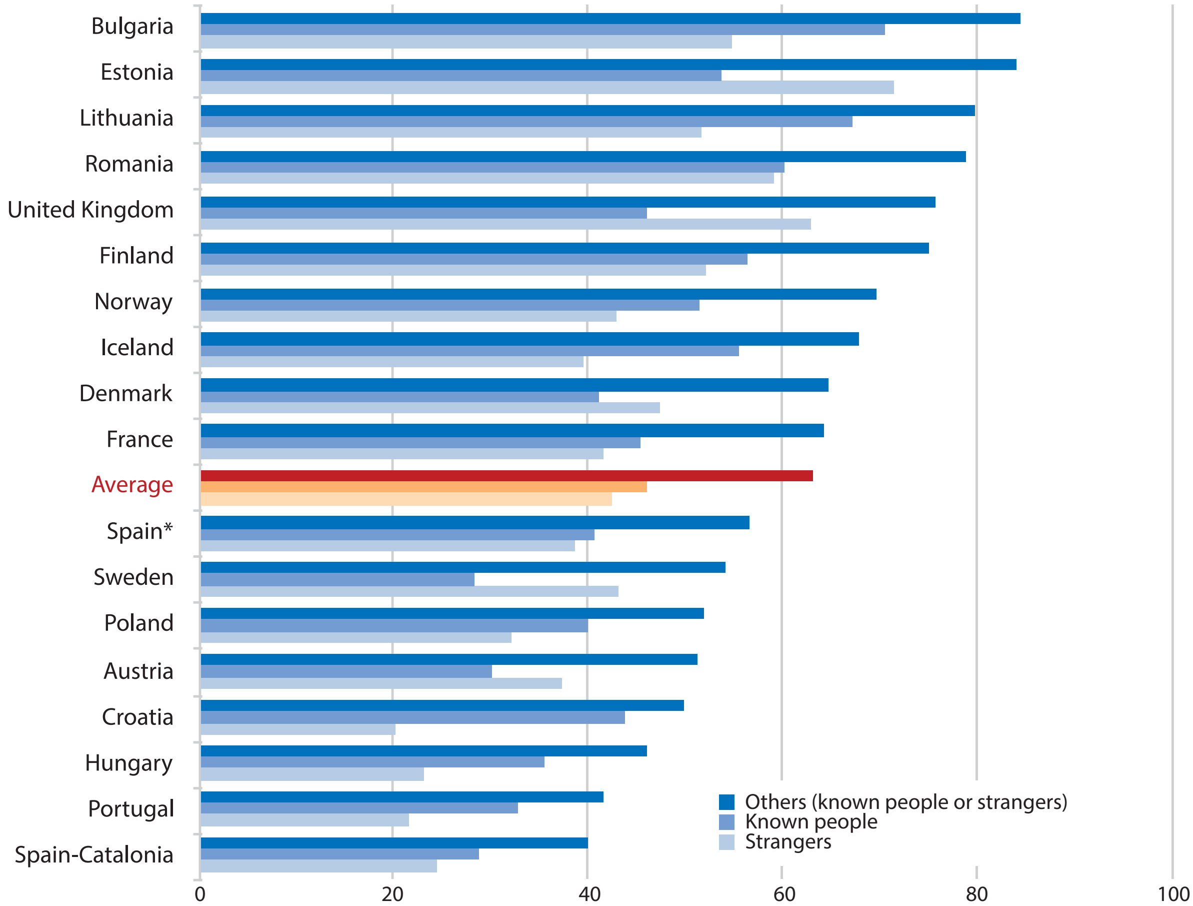
Alcohol-related harm from others' drinking: An overview

Figure A3.7.1 depicts the percentage of respondents in each survey who experienced any type of negative effects as a result of others' drinking, and specifically from known people's and strangers' drinking, in the last 12 months. Across all countries (excluding Greece and Italy, for which this variable could not be calculated), approximately 63% of respondents had experienced negative effects because of others' drinking in the last 12 months. The prevalence of experiencing any harm because of others' drinking varied vastly (ranging from 40% in Spain-Catalonia to 85% in Bulgaria). There is a slight but apparent difference in prevalence of harm from others' drinking between European regions. With the exception of Hungary, Croatia and Poland which reported low prevalence, Central-Eastern and Eastern European countries reported high prevalences of harm (the four highest prevalences were observed in Bulgaria, Estonia, Lithuania and Romania). On average, Nordic countries ranked second among the regions for prevalence of any harm from others' drinking, with all Nordic countries (except for Sweden) reporting prevalences upwards of 64%. Prevalence varied greatly among Central-Western and Western European countries, with the United Kingdom reporting a high prevalence of harm whilst France and Austria had moderate and relatively low prevalences, respectively. Southern European region, on average, reported the lowest prevalences of harm from others' drinking, with Portugal and Spain-Catalonia reporting the lowest prevalences.

Averaging the prevalences of all countries, a slightly larger percentage of respondents reported being negatively affected in any way by a known person who had been drinking (46%) than by a stranger who had been drinking (42%). This effect was true in a slight majority of countries, with the exception of Estonian, British, Danish, Swedish and Austrian respondents, who were more likely to report being harmed by a stranger than by a known person.

[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

Figure A3.7.1. Prevalence (%) of any harm from others' drinking, including known people and strangers, in the last 12 months



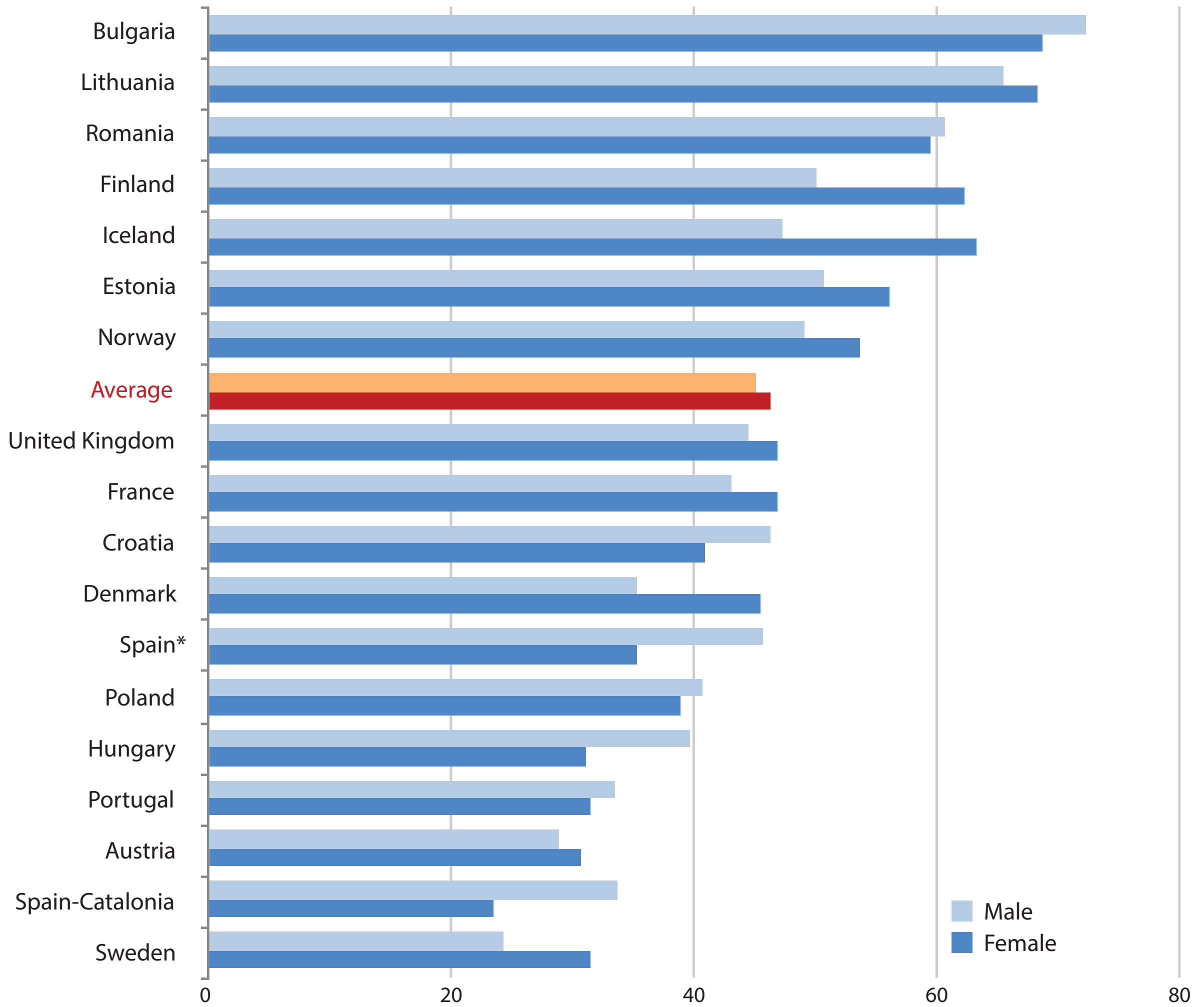
Denominator: All respondents, excluding respondents who did not report whether they experienced harm (N = 29,858).
Data for Greece and Italy were not included because data was not available for the relationships with heavy drinkers section.
>5% of the sample from Denmark and Iceland were excluded from the denominator due to missing data.
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.7.2 shows the percentage of respondents by gender who report experiencing any harm from a known person's drinking, with countries ordered according to the combined prevalence of harm from known people for both genders. Across all countries (excluding Greece and Italy), approximately 45% of males and 47% of females had experienced negative effects because of known people's drinking in the last 12 months. The prevalence of experiencing any harm because of known people's drinking varied vastly (ranging from approximately 28% in Sweden to 70% in Bulgaria).

As was the case with prevalence of any harm from others' drinking (known people and strangers, combined), the Central-Eastern and Eastern European countries of Bulgaria, Lithuania, Romania and Estonia were among those reporting the highest prevalences for harm from known people's drinking (53% and greater). Other Central-Eastern and Eastern European countries reported comparatively low prevalences of harm from known people's drinking. With the exception of Sweden (which reported the lowest prevalence among all countries), Nordic countries reported the fourth to seventh highest prevalences of harm from known people's drinking. Central-Western and Western European countries reported relatively moderate prevalences, and Southern European countries were among those reporting the lowest prevalences of harm from known people's drinking.

Averaging the estimates of all countries, women were more likely than men to have experienced any harm from known people's drinking in the last 12 months. However, this effect was not uniform for all countries and differences were observed between regions. A relatively large gender gap was observed in Nordic countries, with a far greater percentage of women than men reporting being harmed from known people's drinking in all Nordic countries. Compared to men, the percentage of women harmed by a known person's drinking was also greater in all Central-Western and Western European countries. Interestingly, the gender difference was reversed in Southern European nations, with a greater percentage of men compared to women who reported being harmed by a known person in all of the included countries. A consistent gender difference was not observed in Central-Eastern and Eastern European nations.

Figure A3.7.2. Prevalence (%) of experiencing harm because of known people's drinking in the last 12 months by males and females



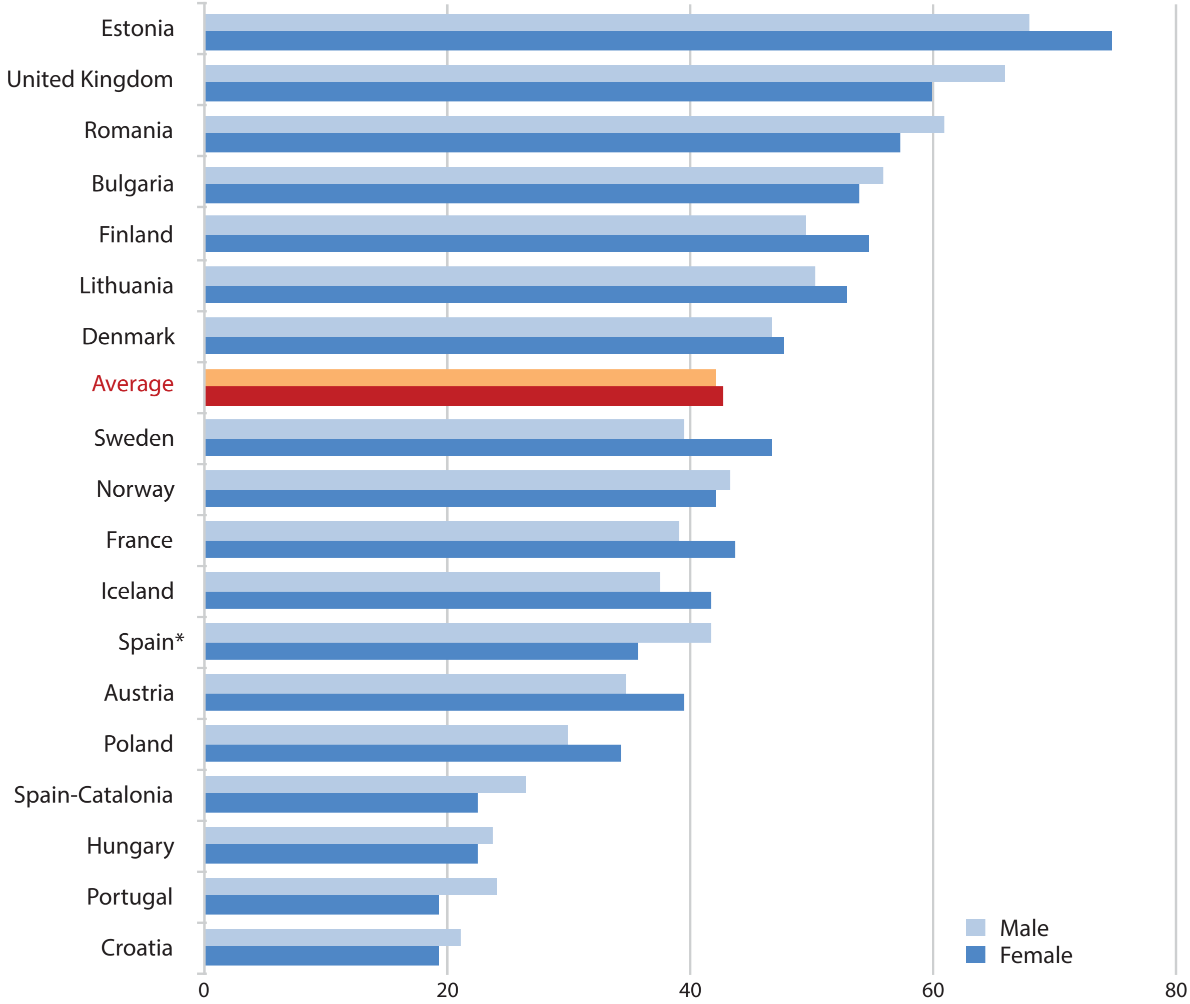
Denominator: All respondents, excluding people who were harmed but did not report whether a known person or stranger caused the harm (N = 29,748). >5% of the sample from Bulgaria, Denmark and Iceland were excluded from the denominator due to missing data.
Data for Greece and Italy were not included because respondents were not asked whether they were harmed by a known person or stranger.
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.7.3 depicts the percentage of respondents by gender who report experiencing any harm from the drinking of strangers (i.e. people that the respondent does not known personally) with countries ordered according to the combined prevalence of harm from strangers for both genders. Averaging the estimates from all countries (excluding Greece and Italy), the gender difference was small, with approximately 42% of males compared to 43% of females reporting experiencing any negative effects because of strangers' drinking in the last 12 months. Again, prevalence of experiencing any harm because of strangers' drinking varied vastly (ranging from approximately 20% in Croatia to 71% in Estonia).

As was the case with prevalence of any harm from others' drinking (known people and strangers, combined), and from only known people's drinking, there was a divide between high-prevalence and low-prevalence countries in Central-Eastern and Eastern Europe. Estonia, Romania, Bulgaria, and Lithuania were among those reporting the highest prevalences of harm from strangers' drinking (greater than 50%). In contrast, Croatia, Hungary and Poland had some of the lowest prevalences of harm from strangers' drinking (less than 33%). With the exception of the United Kingdom, which reported 65% prevalence of experiencing harm from strangers' drinking, Nordic and Central-Western and Western European countries reported moderate prevalences of harm from strangers' drinking (ranging from 38% in Austria to 52% in Finland). All Southern European countries reported relatively low prevalences of harm from strangers' drinking.

With the exception of Norway (in which the prevalence of harm from strangers' drinking was 2% greater in men than women), a greater percentage of women than men were harmed because of strangers' drinking in Nordic countries. There was no consistent difference between men and women in Central-Eastern and Eastern European countries, nor in Central-Western and Western Europe. As was the case for harm from known people's drinking, a greater percentage of men than women reported being harmed because of a stranger's drinking in all of the included countries from Southern Europe.

Figure A3.7.3. Prevalence (%) of experiencing harm because of strangers' drinking in the last 12 months by males and females



Denominator: All respondents, excluding people who were harmed but did not report whether a known person or stranger caused the harm (N = 30,004).
>5% of the sample from Denmark and Iceland were excluded from the denominator due to missing data.
Data for Greece and Italy were not included because respondents were not asked whether they were harmed by a known person or stranger.
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Summary: Alcohol-related harm from others' drinking: An overview

In summary, the majority (63%) of Europeans have been negatively affected in some way because of the drinking of others in the last 12 months. Generally speaking, the highest prevalences of harm from others' drinking, harm from known people's drinking and from strangers' drinking are observed in countries from Central Eastern and Eastern Europe. However, a high prevalence of alcohol-related harm from others was not uniform across all countries in this region, with Croatia, Hungary and Poland among the countries with the lowest prevalence of harm from others' drinking. Nordic and Central-Western and Western European countries ranked moderately for prevalence of harm from others' drinking, and Southern European countries consistently reported low prevalences of harm from others' drinking.

Interestingly, in those Southern European countries reporting a low prevalence of harm from others' drinking, a greater proportion of men than women were harmed because of any person's drinking (from known people and from strangers). This gender difference was in contrast to other countries, which more often than not had a greater proportion of women compared to men that were harmed because of the drinking of others.

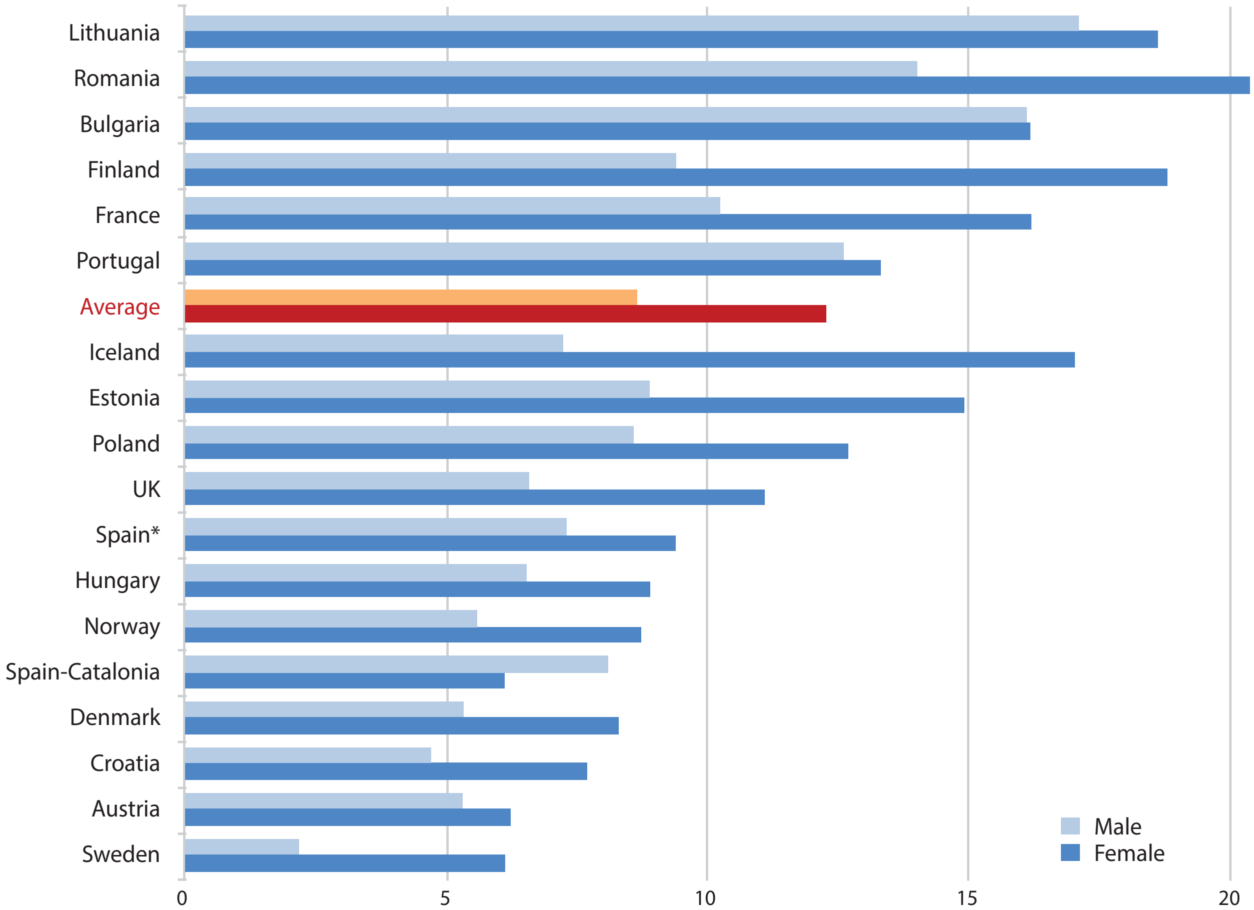
Relationships with heavy drinkers and harm from their drinking

In Figures A3.7.1 and A3.7.2 we have already shown the overall prevalences of harm from known drinkers, as reported either in terms of different relationships with known drinkers or in terms of specific harm items. We turn now to a more detailed consideration of these harms, concentrating now on the responses in terms of the different relationships with the drinker. We consider first the more severe level of being harmed 'a lot' (Figure A3.7.4), and then the reported prevalences of harm by type of relationship. (Tables A3.7.2 and A3.7.3).

Figure A3.7.4 presents the percentage of respondents reporting they were negatively affected 'a lot' by a known heavy drinker. The average 12-month prevalence across all countries was 9% among men and 12% among women, thus roughly one quarter of those reporting any harm.

Again, the variation between countries was substantial, with the prevalence for women ranging from 6% in Sweden to over 20% in Romania and the prevalence for men varying from 2% in Sweden to 17% in Lithuania. Somewhat in contrast to the result for any harm, women were affected more than men except in Spain-Catalonia and with fairly small gender differences in Bulgaria and Portugal. As in Figure A3.7.2, the highest prevalence of severe harm was found in Central Eastern and Eastern European countries, with Lithuania scoring highest followed by Romania and Bulgaria; regional patterns were otherwise fairly mixed.

Figure A3.7.4. Prevalence (%) of being negatively affected a lot by any known fairly heavy drinker in the last 12 months in males and females



Denominator: all respondents, excluding respondents who did not report whether they experienced harm.
17.7% and 16% of the Bulgarian sample are missing for male and female respondents, respectively.
Data was not available for Greece and Italy.
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Table A3.7.2 summarizes the prevalence of any harm from known heavy drinkers by country divided into the respondent's relationship to the heavy drinker. The highest prevalence was found for harm from friends' drinking (16.4%), followed in descending order by family member/relative not in the household (10.7%), work/school mates (7.4%), neighbours (6.4%) and household members (4.3%). There is no consistent rank order of countries or regional pattern across the different relationships to the heavy drinker. For instance, Central and Eastern European countries tend to have a relatively high prevalence of harm from household members and neighbours whereas Nordic countries score high on harm from family members or relatives not in the household or from "other friends". Still, no country has consistently a higher than average prevalence of harm across the relationships and only three surveys are consistently lower than the average – Austria, the UK and Spain-Catalonia. Thus, the rankings of countries in prevalence of harm from known heavy drinkers differ depending on what relationship is considered.

Table A3.7.3 shows the proportion of respondents reporting being negatively affected "a lot" for the different relationships to the heavy drinker. On average, the highest prevalence is found for harm from family members/relatives not in the household and heavy drinking friends (4.2%), followed by family members (2.5%), neighbours (2.3%) and work/school mates (1.9%). Thus, a higher proportion of harm is reported to be severe when it comes to harm from household members (58%) compared with the other relationships and in particular in comparison with friends and work mates (about 25%).

Table A3.7.2. Prevalence (%) of harm (being negatively affected 'a lot' or 'a little') by a known fairly heavy drinker in the last 12 months according to type of relationship

	N	Household member	Family member or relative not in household	Work or school mate	Neighbour	Other friend or acquaint-ance	Any harm
Austria	3,406	2.2	7.3	5.5	4.1	9.8	18.9
Bulgaria	3,000	7.1	10.0	7.4*	11.2*	16.6*	34.0*
Croatia	1,500	2.9	8.4	8.2	8.6	13.5	25.7
Denmark	1,575	2.8	14.0	4.8	2.5	14.5	29.5
<u>Estonia</u>	2,153	4.8	11.1	6.6	9.0	18.5	36.4
<u>Finland</u>	1,500	1.7	12.0	9.2	5.5	31.0	47.6
<u>France</u>	1,701	2.6	16.2	15.8	4.9	18.8	37.0
Hungary	2,005	2.1	9.0	11.1	8.0	16.7	27.5
<u>Iceland</u>	873	9.9	22.2	7.7	2.4	29.8	41.8
Lithuania	1,513	10.1	12.8	7.9	11.5	15.7	30.3
<u>Norway</u>	1,493	2.0	14.3	13	3.2	20.8	36.8
Poland	1,555	4.5	8.0	6.6	12.2	12.6	26.7
Portugal	1,500	4.5	7.3	6.6	8.7	12.0	22.0

	N	Household member	Family member or relative not in household	Work or school mate	Neighbour	Other friend or acquaint-ance	Any harm
Romania	1,500	7.5	10.8	7.5	13.4	15.7	33.6
Spain**	1,645	1.9	7.0	5.2	4.7	18.8	27.1
Spain-Catalonia	661	1.8	4.8	4.7	2.4	13.2	19.4
Sweden	1,624	5.6	7.2	2.4	1.3	6.3	18.5
United Kingdom	1,046	3.9	9.5	2.8	1.5	11.2	26.5
Total	**30,250**	**4.3**	**10.7**	**7.4**	**6.4**	**16.4**	**30.0**

Denominator: all respondents, excluding respondents who did not report whether they experienced harm.
* Between 9.7% and 16.8% of the sample are missing for these items.
** Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.
Data was not available for Greece and Italy.
Italicized = among the bottom five countries for prevalence of any harm; underlined = among the top five countries for prevalence of any harm.

Table A3.7.3. Prevalence (%) of being negatively affected a lot by a known fairly heavy drinker in the last 12 months according to type of relationship

	N	Household member	Family member or relative not in house-hold	Work or school mate	Neighbour	Other friend or acquaint-ance	Any known heavy drinker
Austria	3,406	0.9	1.9	1.3	1.4	2.1	5.7
Bulgaria	3,000	4.7	4.5	1.5*	4.0*	3.3*	16.1*
Croatia	1,500	2.1	3.2	1.0	1.6	1.9	6.1
Denmark	1,575	1.2	3.0	1.1	0.3	2.4	6.9
Estonia	2,153	2.4	3.5	1.6	3.1	3.9	12.0
Finland	1,500	1.1	5.6	2.4	1.8	5.9	14.0
France	1,701	1.2	6.6	4.5	1.6	4.6	13.3
Hungary	2,005	1.5	2.9	1.8	1.4	2.1	7.7
Iceland	873	4.6	6.0	1.7	0.5	7.8	12.1
Lithuania	1,513	7.5	6.4	3.4	5.4	6.4	17.8
Norway	1,493	0.7	3.4	1.5	0.4	2.6	7.2

	N	Household member	Family member or relative not in house-hold	Work or school mate	Neighbour	Other friend or acquaint-ance	Any known heavy drinker
Poland	1,555	3.0	3.2	1.7	4.0	3.7	10.6
Portugal	1,500	3.1	5.0	3.0	5.0	6.9	13.0
Romania	1,500	5.1	6.6	2.9	5.9	5.9	17.2
Spain**	1,645	1.1	3.5	1.3	0.8	4.4	8.3
Spain-Catalonia	661	0.8	2.7	1.4	0.5	3.9	7.1
Sweden	1,624	-	-	-	-	-	4.2
UK	1,046	2.1	3.4	0.5	0.6	3.0	8.9
Total	**30,250**	**2.5**	**4.2**	**1.9**	**2.3**	**4.2**	**10.5**

Denominator: all respondents, excluding respondents who did not report whether they experienced harm.

* Between 9.7% and 16.8% of the sample are missing for these items.

** Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Data was not available for Greece and Italy.

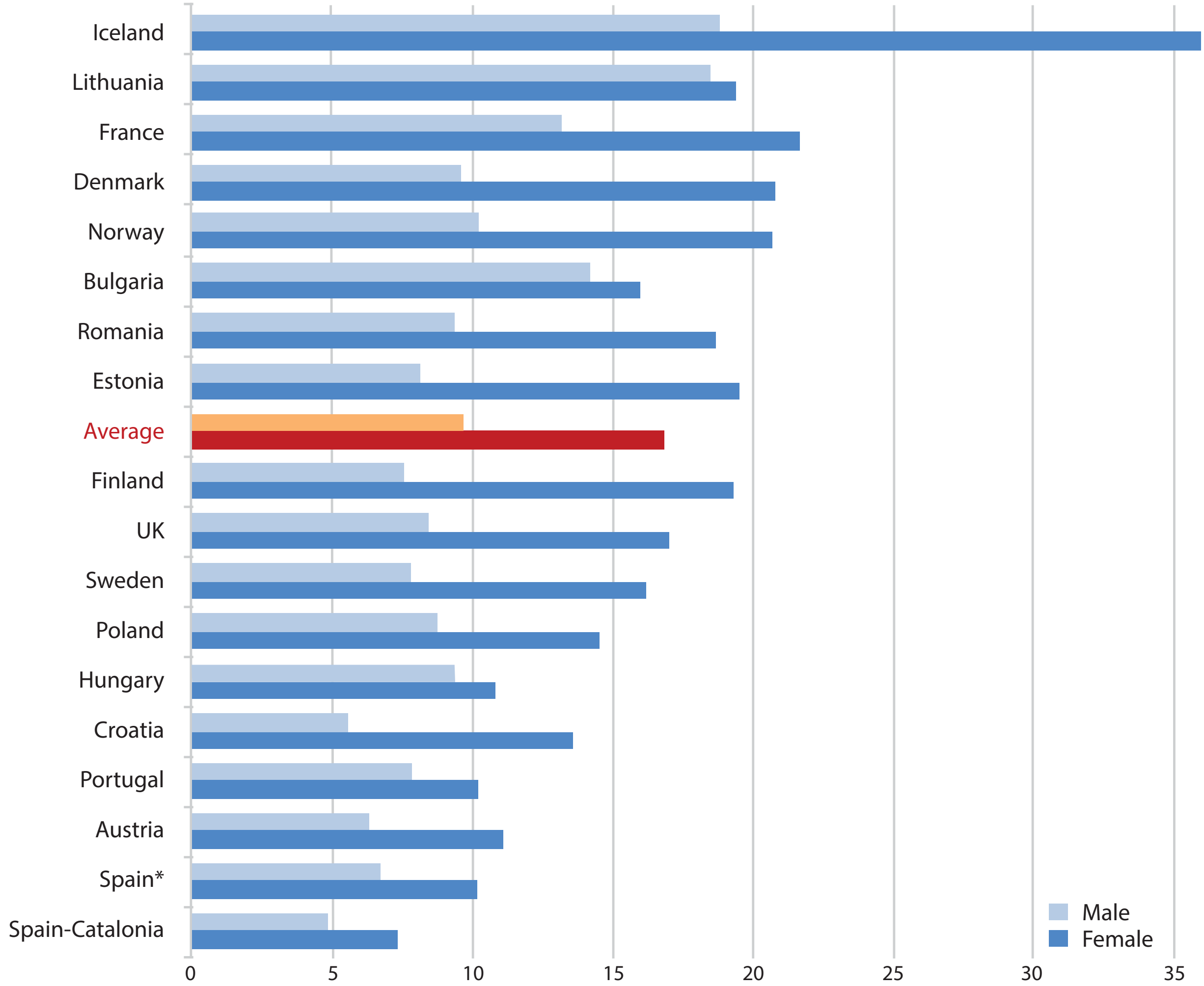
Data on harm in specific relationships was not available for Sweden.

Italicized = among the bottom five countries for prevalence of being negatively affected by any known heavy drinker; underlined = among the top five countries for prevalence of being negatively affect by any known heavy drinker.

Gender differences in harm vary between type of relationship to the heavy drinker. On average across all countries, 17% of women report harm in the last 12 months from household members and family members not in the household, compared with 10% among men (Figure A3.7.5). This difference is found in all countries, but is especially marked in Finland, Estonia and Croatia and the least marked in Lithuania, Bulgaria and Hungary.

As to harms from non-family or household members (Figure A3.7.6), 24% of men and 22% of women across all countries reported harm from a known work or school mate and/or neighbour and/or other friend or acquaintance. These types of harm were somewhat more common among men in majority of countries. However, some countries deviated from this pattern with more women reporting harm in e.g. Finland and Iceland, and in some countries, no gender difference was revealed, e.g. in Denmark.

Figure A3.7.5. Prevalence (%) of being negatively affected by household member and/or family member/relative not in household in the last 12 months in males and females

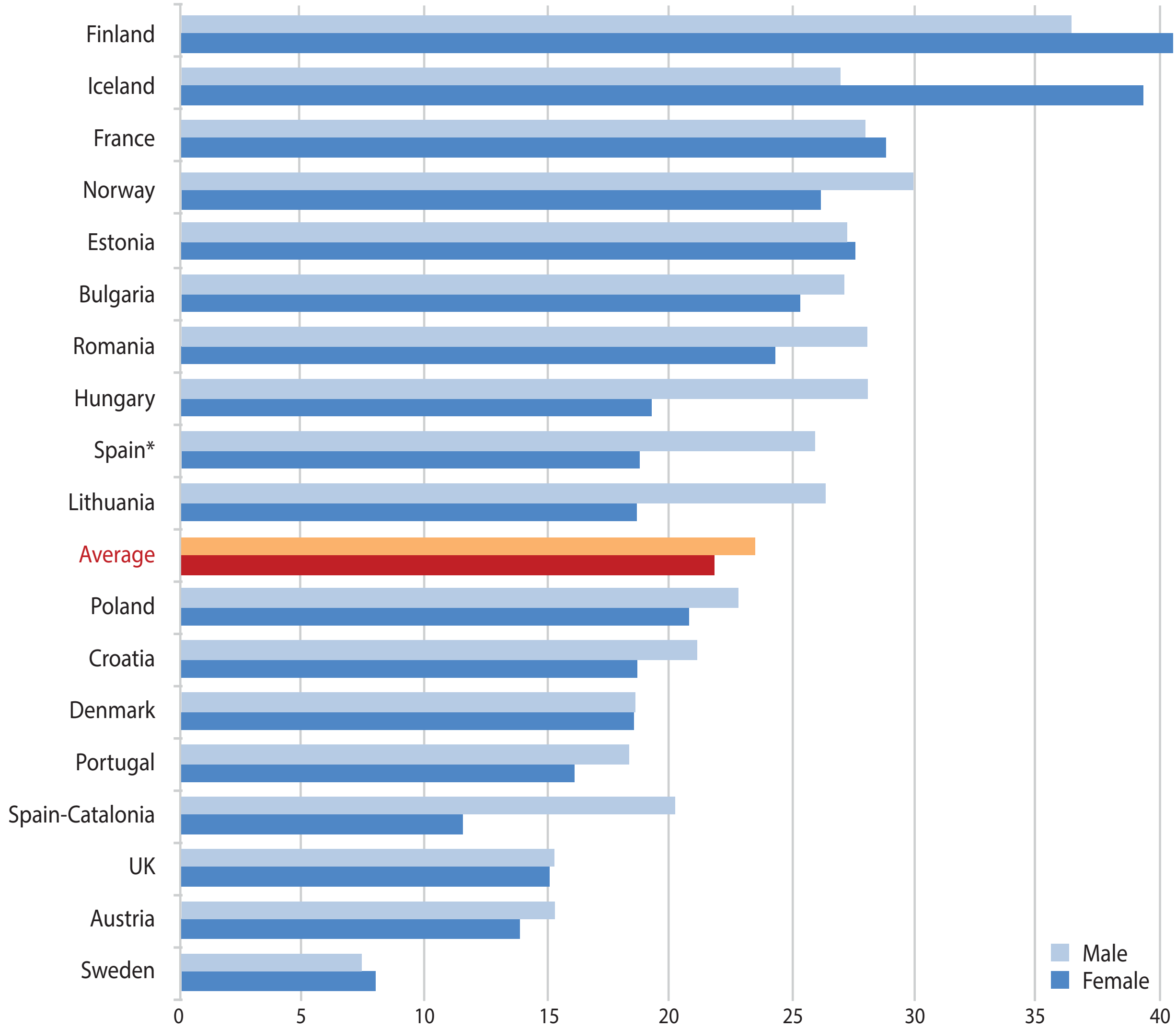


Denominator: all respondents, excluding respondents who did not report whether they experienced harm.

Data was not available for Greece and Italy.

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Figure A3.7.6. Prevalence (%) of being negatively affected by work or school mate and/or neighbour and/or other friend or acquaintance in the last 12 months in males and females



Denominator: all respondents, excluding respondents who did not report whether they experienced harm.
20.5% and 19.5% of the Bulgarian sample are missing for male and female respondents, respectively.
Data was not available for Greece and Italy.
* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Summary: Relationships with heavy drinkers and harm from their drinking

In summary, 30% of Europeans from the 18 countries included in these analyses reported being harmed by a known heavy drinker during the last 12 months and 10.5% reported having been affected 'a lot'. The proportion of harm varied substantially between the countries and there was no clear geographical pattern. Harm was most often reported due to the drinking of a friend or acquaintance and least common due to a household member's drinking. However, a greater proportion of severe harm, in terms of being harmed 'a lot', was found among those reporting harm from a household member, and a smaller proportion of severe harm was shown among those reporting harm from a friend or acquaintance.

On average across countries, women more often reported harm from a known heavy drinker than men, although a few countries were exceptions. This gender difference was even more explicit when assessing the prevalence of severe harm. However, when comparing harm from different relationship types, the reversed gender pattern was found from harm due to drinking of a non-family or household member, where the prevalence of harm in general was higher among men.

Types of harm from others' drinking

This section describes specific harms experienced as a result of others' drinking, in terms of the prevalence and severity of these harms. Table A3.7.4 describes the prevalence of eight different types of harms experienced because of others' drinking in the last 12 months. These items have also been grouped into four 'less-serious' and four 'more-serious' harm items based on the results of multiple correspondence analyses. Averaging the estimates of all countries, the majority (55%) of European respondents reported experiencing at least one of the eight types of harm from others' drinking. Generally, a larger percentage of respondents reported experiencing the 'less-serious' harm items than the 'more-serious' harm items.

Bulgaria, Estonia, Lithuania, Romania and the United Kingdom had the highest percentage of respondents who experienced any of the eight harm items as well as the highest percentage of respondents who reported experiencing at least one of the 'less-serious' types of harm from others' drinking. Countries among the bottom five for prevalence of experiencing any of the eight types of harm from others tended to report low prevalences of each of the four 'less-serious' harm items (compared to the average across all countries). Therefore, the prevalence of less-serious harm from others' drinking is likely to be an important driver for prevalence of any type of harm (including those other than the eight included in this section) from others' drinking. In addition, a high prevalence of more-serious harms is also likely to be an important driver for overall prevalence of harm from others' drinking; Bulgaria, Estonia, Lithuania, Romania and the United Kingdom also had relatively high prevalences of the 'more-serious' harm items.

The percentage of respondents who reported being a passenger with a drunk driver varied greatly between countries and regions (ranging from less than 1% in Iceland to 16% in Croatia and Romania). Despite being among the bottom five countries for prevalence of experiencing any of the eight types of harm from others' drinking, Croatia reported the highest percentage of respondents who had been a passenger with a drunk-driver. Interestingly, a high percentage of people who report being a passenger with a drunk driver did not always translate into a relatively high percentage who report being in traffic accidents because of others' drinking. Conversely, a low percentage of passengers of drunk drivers usually translated into a relatively low percentage of people involved in a traffic accident. Percentages varied within most European regions, making it difficult to identify strong regional differences in prevalence of drunk-driving and accidents due to drunk-driving. However, the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) reported prevalences that were consistently lower than the European mean for the percentage of respondents who were passengers of drunk drivers and the percentage involved in an accident with someone who had been drinking. On the other hand, estimates for the Southern European countries were generally above the mean prevalence of the two harms from others' drunk driving across Europe.

An exceptionally high percentage of Lithuanian (12.1%), Romanian (8.5%) and Bulgarian (6.2%) respondents reported being harmed physically as a result of others' drinking compared to the average prevalence of 3.3% for European countries.

As was the case in the overview section (any harm from heavy drinkers <u>or</u> any type of harm, including non-heavy drinkers), the Central-Eastern and Eastern European countries of Bulgaria, Estonia, Lithuania, and Romania had the five highest percentages of respondents who reported experiencing any of the eight types of harms from others' drinking. Again, though, the remaining Central-Eastern and Eastern European countries had far fewer respondents who reported experiencing any of the harm from other items. It was difficult to identify a region with the lowest prevalence of experiencing any of the eight types of harm from others' drinking because these were mostly moderate and varied within each of the remaining European regions.

Table A3.7. 4. Prevalence (%) of harm experienced because of other people's drinking in the last 12 months, according to the type of harm experienced

	N	'Less-serious' harm items~				'More-serious' harm items~				Any harm
		Woken at night	Felt unsafe in public place	Annoyed by vomit, urine or litter	Verbally abused	In a serious argument	Harmed physically	Passenger with drunk-driver	In a traffic accident	
Austria	*3,393*	14.0	25.8	18.9	13.5	5.9	1.3	4.9	0.6	46.7
<u>Bulgaria</u>	*3,000*	31.7	12.2	49.8	27.1	22.7	6.2	7.1	2.5	77.7
Croatia	*1,500*	15.5	12.1	13.3	9.0	13.3	1.2	16.1	1.6	41.7
Denmark	*1,496**	12.2	20.3	41.7	9.7	8.5	1.6	3.5	0.1	56.5
<u>Estonia</u>	*2,152*	26.4	34.2	62.0	18.0	25.3	2.3	5.2	1.1	80.4
Finland	*1,499*	20.5	18.6	53.3	17.8	10.3	1.9	0.6	0.3	65.0
France	*1,701*	17.8	20.8	26.6	18.4	6.9	2.2	5.6	1.5	53.0
Greece	*1,518*	13.4	28.3	31.0	16.5	6.7	2.6	10.8	2.2	54.5
Hungary	*2,005*	10.5	10.4	20.6	5.6	9.2	1.5	1.8	0.7	35.1
Iceland	*813**	22.4	11.1	27.1	15.5	9.6	2.7	1.3	0.0	51.3
Italy	*1,468*	13.0	27.9	31.8	10.4	9.9	1.5	10.6	2.8	51.3
<u>Lithuania</u>	*1,513*	23.9	39.4	34.8	18.4	36.8	12.1	6.9	3.3	76.7
Norway	*1,493*	30.2	24.1	22.3	18.3	11.2	3.7	3.7	1.4	58.6
Poland	*1,554*	14.5	7.4	27.8	11.9	8.9	3.4	2.9	1.5	43.3
Portugal	*1,496*	11.8	12.4	16.2	7.8	6.8	2.1	7.3	2.5	33.0
<u>Romania</u>	*1,491*	38.0	36.0	44.0	39.1	21.3	8.5	15.8	4.1	76.0
Spain**	*1,645*	20.3	9.7	29.5	12.3	19.4	2.1	13.1	2.1	50.4
Spain-Catalonia	*660*	10.3	8.0	17.6	7.0	12.1	0.6	5.2	0.9	30.8
Sweden	*1,607*	15.3	32.0	27.4	17.5^	8.5	1.8	1.7	0.3	49.4
<u>United Kingdom</u>	*1,044*	37.4	29.2	46.4	24.9	17.0	4.6	3.6	1.5	72.5
Total	***33,048***	**20.3**	**21.6**	**31.9**	**16.2**	**14.0**	**3.3**	**6.8**	**1.7**	**55.2**

Denominator: All respondents, excluding respondents who did not report whether they experienced harm.

* >5% of the sample from Denmark and Iceland were excluded from the denominator due to missing data.

^ >5% of the sample are missing for this item (14.3%).

~ Based on results of multiple correspondence analyses.

Italicized = among the bottom five countries for prevalence of any harm; <u>underlined</u> = among the top five countries for prevalence of any harm.

** Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Table A3.7.5 describes the percentage of respondents who reported being negatively affected a lot in the last 12 months for each of the eight types of harms that are experienced because of others' drinking. Almost one quarter (23.1%) of respondents reported being negatively affected a lot as a result of experiencing any of the eight harm items. The prevalence of being negatively affected a lot by others' drinking varied greatly between countries (ranging from 12.5% in Austria to 49.3% in Lithuania).

Generally, countries with a high percentage of respondents who reported experiencing any of the eight harm items (without indication of the negative effects of these harms) also had a high percentage of respondents who reported being negatively affected a lot as a result of experiencing any of the eight harm items. Thus, the comparisons between countries and regions from Table A3.7.5 largely resemble those from Table A3.7.4. As expected, the Central-Eastern and Eastern European countries of Bulgaria, Estonia, Lithuania, and Romania had the highest percentage of people who report being negatively affected a lot as a result of experiencing any of the eight types of harm. Although the United Kingdom was among the top five countries for prevalence of being negatively affected a lot, only 3% more respondents there than the mean for Europe were negatively affected a lot. Again, identifying a region with consistently low or consistently high prevalences of negative effects from others' drinking was difficult because prevalences in countries within each region were varied.

Being a passenger of a drunk-driver appears less likely to result in harm than being involved in a traffic accident with someone who had been drinking – less than one third of respondents who reported being a passenger of a drunk driver were negatively affected a lot by that experience, whereas more than half of respondents who were involved in a traffic accident were affected negatively a lot by that experience. Being physically harmed appears to be among the most serious of the eight harm items, with approximately two thirds of respondents who reported being harmed physically by someone who had been drinking reporting being negatively affected a lot by that experience.

Similar to the prevalence of experiencing any of the eight harm types, a larger percentage of respondents reported being negatively affected a lot by any of the 'less serious' harm items compared to the 'more serious' harm items. However, the difference in the prevalence of 'less serious' and 'more serious' harm items was less pronounced when considering only those who were negatively affected a lot (as opposed to counting all those who experienced the items, regardless of whether they were negatively affect a lot). Those who experience the 'more serious' types of harm are thus more likely to be negatively affected a lot because of others' drinking than those who experience the 'less serious' types of harm.

Table A3.7.5. Prevalence (%) of being negatively affected a lot because of other people's drinking in the last 12 months, according to the type of harm experienced

	N	'Less-serious' harm items~				'More-serious' harm items~				Negatively affected a lot for any item
		Woken at night	Felt unsafe in public place	Annoyed by vomit, urine or litter	Verbally abused	In a serious argument	Harmed physically	Passenger with drunk-driver	In a traffic accident	
Austria	*3,393*	5.2	4.0	4.5	3.1	2.0	0.5	0.4	0.1	12.5
Bulgaria	*3,000*	9.5	2.4	17.2	13.9	8.5	3.7	1.5	0.8	38.0
Croatia	*1,500*	5.2	2.2	4.5	3.4	3.8	0.9	2.7	0.5	12.7
Denmark	*1,496**	1.8	3.7	8.1	2.9	4.1	0.7	1.1	0.1	15.7
Estonia	*2,152*	10.2	10.2	22.9	6.1	6.1	1.1	1.5	0.5	35.7
Finland	*1,499*	5.7	3.2	8.5	4.2	4.2	1.1	0.1	0.1	17.5
France	*1,701*	8.2	5.7	7.9	6.3	4.5	1.4	2.1	0.9	21.6
Hungary	*2,005*	5.2	3.0	7.7	2.7	4.9	1.3	0.8	0.4	15.1
Iceland	*813**	6.1	3.8	4.5	4.6	6.0	0.7	0.5	0.0	17.3
Lithuania	*1,513*	10.6	15.1	16.5	10.8	19.8	9.1	3.4	2.3	49.3
Norway	*1,493*	6.2	5.3	4.4	3.4	4.2	1.6	1.7	0.8	17.3
Poland	*1,554*	4.4	3.4	12.2	4.9	4.5	1.2	1.0	0.5	20.6
Portugal	*1,496*	6.3	3.7	5.0	4.1	3.2	0.5	2.1	1.6	14.6
Romania	*1,491*	17.8	11.6	20.8	16.0	10.6	5.9	5.4	2.5	39.8
Spain**	*1,645*	8.7	3.2	11.9	4.2	7.4	1.6	3.1	0.9	23.5
Spain-Catalonia	*660*	5.2	2.4	7.4	2.6	5.0	0.3	2.1	0.5	14.8
United Kingdom	*1,044*	10.1	5.8	9.8	5.8	6.8	2.5	0.4	0.7	26.1
Total	***28,455***	**7.9**	**5.4**	**10.7**	**6.1**	**6.4**	**2.2**	**1.9**	**0.9**	**23.1**

Denominator: All respondents, excluding respondents who did not report whether they experienced harm and respondents who reported experiencing harm but did not report whether they were negatively affected.

* >5% of the sample from Denmark and Iceland were excluded from the denominator due to missing data.

~ Based on results of multiple correspondence analyses.

Data for Greece, Italy and Sweden were not included because respondents were not asked whether they were negatively affected.

Italicized = among the bottom five countries for prevalence of being negatively affected a lot; underlined = among the top five countries for prevalence of being negatively affected a lot.

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Table A3.7.6 depicts the mean harm score experienced by men and women because of known people's and strangers' drinking. It is important to note that the harm scores presented in this chapter refer to the mean harm score across all respondents who answered the questions about the eight types of harms, including those that did not experience any of the eight harm types (thus it is incorrect to interpret this as the mean harm score among those who experienced any type of harm from others' drinking). The mean harm score, ranging from zero (no harm) to 10 (maximum harm), from known people's drinking was 0.40 across all countries, and 0.38 as a result of strangers' drinking. Again, the Central-Eastern and Eastern Europe region was divided, with half of the nations having some of the highest mean harm scores and the other nations having some of the lowest harm scores.

On average, females appeared to experience more harm than men as a result of known people's drinking and strangers' drinking; this effect was observed in the majority of countries. However, for some countries and regions this was not always so. Interestingly, in all of the included Southern European region (Portugal, Spain and Spain-Catalonia), men had a higher mean harm score from known people's as well as from strangers' drinking. Southern European countries were the only ones in which men had a greater harm score from both known people's and from strangers' drinking. In the United Kingdom and Bulgaria the mean harm score from strangers' drinking was greater for men than for women.

Table A3.7.6. Mean harm score experienced because of known people's drinking and strangers' drinking in the last 12 months, by gender

	N	Known people			Strangers		
		Male	Female	Total	Male	Female	Total
Austria	3,372	0.16	0.21	0.18	0.28	0.34	0.31
<u>Bulgaria</u>	2,994	0.69	0.68	0.69	0.46	0.45	0.45
Croatia	1,500	0.32	0.36	0.34	0.15	0.16	0.16
Denmark	1,495*	0.16	0.28	0.23	0.32	0.36	0.34
<u>Estonia</u>	2,152	0.38	0.52	0.45	0.60	0.82	0.72
Finland	1,499	0.22	0.48	0.35	0.30	0.42	0.36
France	1,701	0.22	0.36	0.30	0.34	0.41	0.38
Hungary	1,994	0.24	0.26	0.25	0.18	0.19	0.19
Iceland	813*	0.21	0.38	0.29	0.28	0.32	0.30
<u>Lithuania</u>	1,513	0.76	1.07	0.92	0.51	0.59	0.55
Norway	1,492	0.31	0.35	0.33	0.36	0.37	0.36
Poland	1,550	0.29	0.31	0.30	0.26	0.32	0.29
Portugal	1,496	0.29	0.27	0.28	0.22	0.16	0.19
<u>Romania</u>	1,486	0.82	1.04	0.93	0.67	0.75	0.71
Spain**	1,642	0.40	0.38	0.39	0.41	0.38	0.40
Spain-Catalonia	660	0.26	0.17	0.21	0.26	0.24	0.25
<u>United Kingdom</u>	1,043	0.35	0.46	0.41	0.60	0.56	0.58
Total	**28,402**	**0.36**	**0.45**	**0.40**	**0.36**	**0.40**	**0.38**

Denominator: All respondents, excluding people who were missing on more than two out of eight harm items (missing = did not answer have you experienced harm item 'x', or answered yes to have you experienced harm item 'x' but did not answer who caused harm item 'x').

* >5% of the sample from Denmark and Iceland were excluded from the denominator due to missing data.

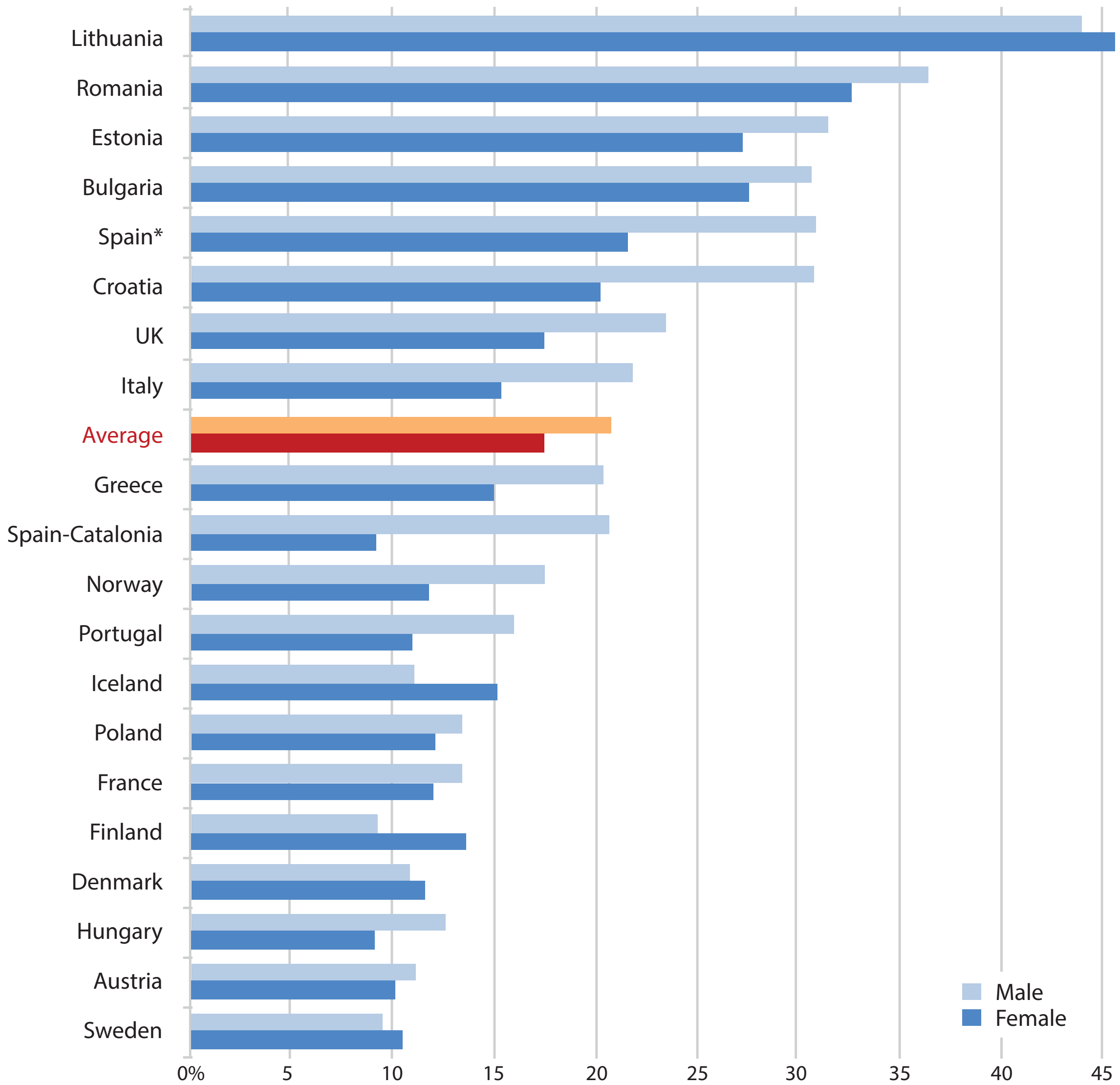
** Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Data for Greece, Italy and Sweden were not included because harm score was not able to be calculated (respondents were not asked whether they were negatively affected by the harm experienced and/or respondents were not whether a known person or stranger caused harm).

Italicized = among the bottom five countries for mean harm score from known people + mean harm score from strangers; <u>underlined</u> = among the top five countries for mean harm score from known people + mean harm score from strangers.

Figure A3.7.7 shows the percentage of men and women who report experiencing any of the four 'more-serious' types of harm from others' drinking. There is a greater percentage of females compared to males who report experiencing harm from known people's drinking or from strangers' drinking (Figures A3.7.2 and A3.7.3), a greater percentage of women who reported being negatively affected a lot by a known fairly heavy drinker (Figure A3.7.4), and a greater mean harm score from known people's and stranger's drinking for females than for males (Table A3.7.6); yet there is a greater percentage of men compared to women reported as experiencing any of the 'more-serious' types of harm from others' drinking. It's worth noting that many of the harms experienced from known drinkers, such as those shown in Figure A3.7.4, that can not be included in this analysis are also serious.

Figure A3.7.7. Prevalence (%) of experiencing any of four more serious harms^ because of other people's drinking in the last 12 months in males and females



Denominator: All respondents, excluding respondents who did not report whether they experienced harm (N = 32,990).

^ 'Harmed physically', 'in a serious argument', 'passenger with a drunk-driver' and 'in a traffic accident'.

>5% of the sample from Denmark and Iceland were excluded from the denominator due to missing data.

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To explore the effects of age, Table A3.7.7 depicts the mean harm score experienced because of known people's and strangers' drinking in younger adults (age 18–34 years), middle-aged adults (age 35–49 years) and older adults (age 50 years or greater). Averaging the harm scores across all countries, the amount of harm experienced because of others' drinking appears to decline as age increases. This effect was evident in all but a few countries. A particularly interesting finding is that, for Bulgaria, Lithuania and Romania, the mean harm score increased as age increased. This suggests that the high prevalence and severity of harm from others' drinking observed in these countries (demonstrated throughout the overview section and types of harm from others' drinking section) is partly explained by a high prevalence and severity of harm experienced in older age groups.

Table A3.7.7. Mean harm score experienced because of known people's drinking and because of strangers' drinking in the last 12 months, by age group

	N	Known people			Strangers		
		18–34 years	35–49 years	50+ years	18–34 years	35–49 years	50+ years
Austria	3,372	0.25	0.15	0.14	0.38	0.30	0.23
Bulgaria	2,994	0.66	0.71	0.69	0.45	0.45	0.45
Croatia	1,500	0.41	0.30	0.31	0.19	0.15	0.12
Denmark	1,495*	0.37	0.21	0.14	0.47	0.31	0.28
Estonia	2,152	0.54	0.41	0.40	0.83	0.69	0.61
Finland	1,499	0.41	0.35	0.28	0.43	0.37	0.28
France	1,701	0.35	0.31	0.23	0.45	0.39	0.31
Hungary	1,994	0.29	0.21	0.24	0.23	0.17	0.16
Iceland	813*	0.37	0.24	0.24	0.40	0.26	0.21
Lithuania	1,513	0.86	1.02	0.89	0.58	0.61	0.46
Norway	1,492	0.47	0.27	0.24	0.55	0.28	0.22
Poland	1,550	0.32	0.32	0.26	0.35	0.27	0.25
Portugal	1,496	0.27	0.29	0.27	0.24	0.18	0.14
Romania	1,486	0.78	0.98	1.05	0.68	0.70	0.77
Spain**	1,642	0.48	0.37	0.29	0.46	0.40	0.32
Spain-Catalonia	660	0.37	0.16	0.13	0.32	0.25	0.17
United Kingdom	1,043	0.54	0.40	0.28	0.66	0.56	0.52
Total	**28,402**	**0.46**	**0.39**	**0.36**	**0.45**	**0.37**	**0.32**

Denominator: All respondents, excluding people who were missing on more than two out of eight harm items (missing = did not answer have you experienced harm item 'x', or answered yes to have you experienced harm item 'x' but did not answer who caused harm item 'x').

* >5% of the sample from Denmark and Iceland were excluded from the denominator due to missing data.

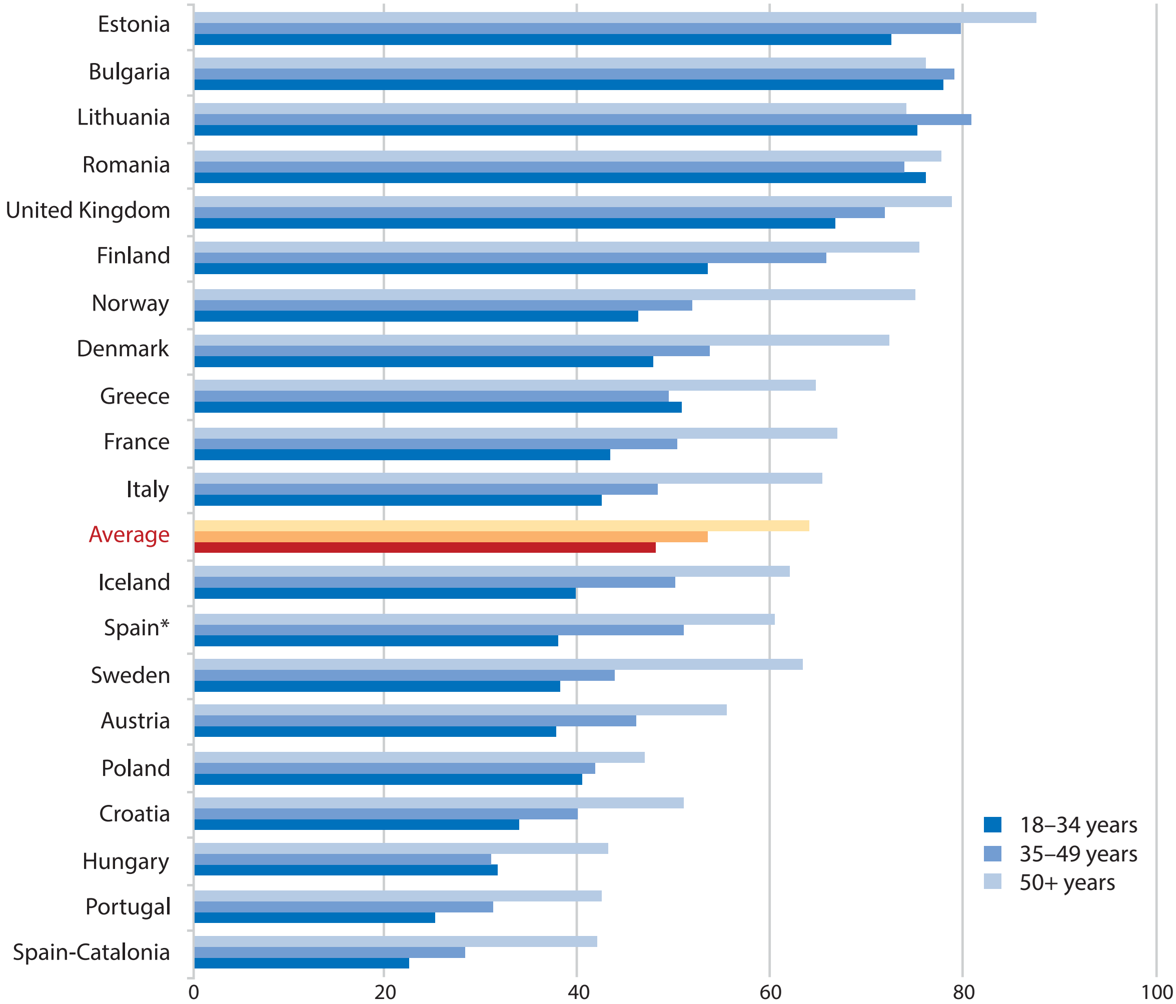
** Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Data for Greece, Italy and Sweden were not included because harm score was not able to be calculated (respondents were not asked whether they were negatively affected by the harm experienced and/or respondents were not whether a known person or stranger caused harm).

Italicized = among the bottom five countries for mean harm score from known people + mean harm score from strangers; underlined = among the top five countries for mean harm score from known people + mean harm score from strangers.

To further explore the effects of age, Figures A3.7.8 and A3.7.9 depict the prevalence of experiencing any of the eight types of harm from others' drinking, and prevalence of experiencing any of the four 'more-serious' types of harm, in the last 12 months, in younger adults, middle-aged adults and older adults. On average, a greater percentage of younger adults experienced any of the eight types of harm from others' drinking compared to middle-aged adults, and a greater percentage of middle-aged adults experienced any of the eight types of harm from others' drinking compared to older adults (64% vs. 53% vs. 48%). Almost uniformly for all countries with low to moderate prevalence of harm from others' drinking, a far greater percentage of younger adults than middle-aged and older adults experienced any of the eight types of harm from others' drinking. In contrast, in countries with a high prevalence of harm from others' drinking (top five = Estonia, Bulgaria, Lithuania, Romania and the United Kingdom) the difference between the percentage of younger adults compared to middle-aged and older adults is relatively small. In Bulgaria and Lithuania, younger adults are actually the least prevalently harmed age-group.

Figure A3.7.8. Prevalence (%) of experiencing any of eight specific harms because of other people's drinking in the last 12 months in younger, middle and older aged-adults



Denominator: All respondents, excluding respondents who did not report whether they experienced harm (N = 32,990).
>5% of the sample from Denmark and Iceland were excluded from the denominator due to missing data.
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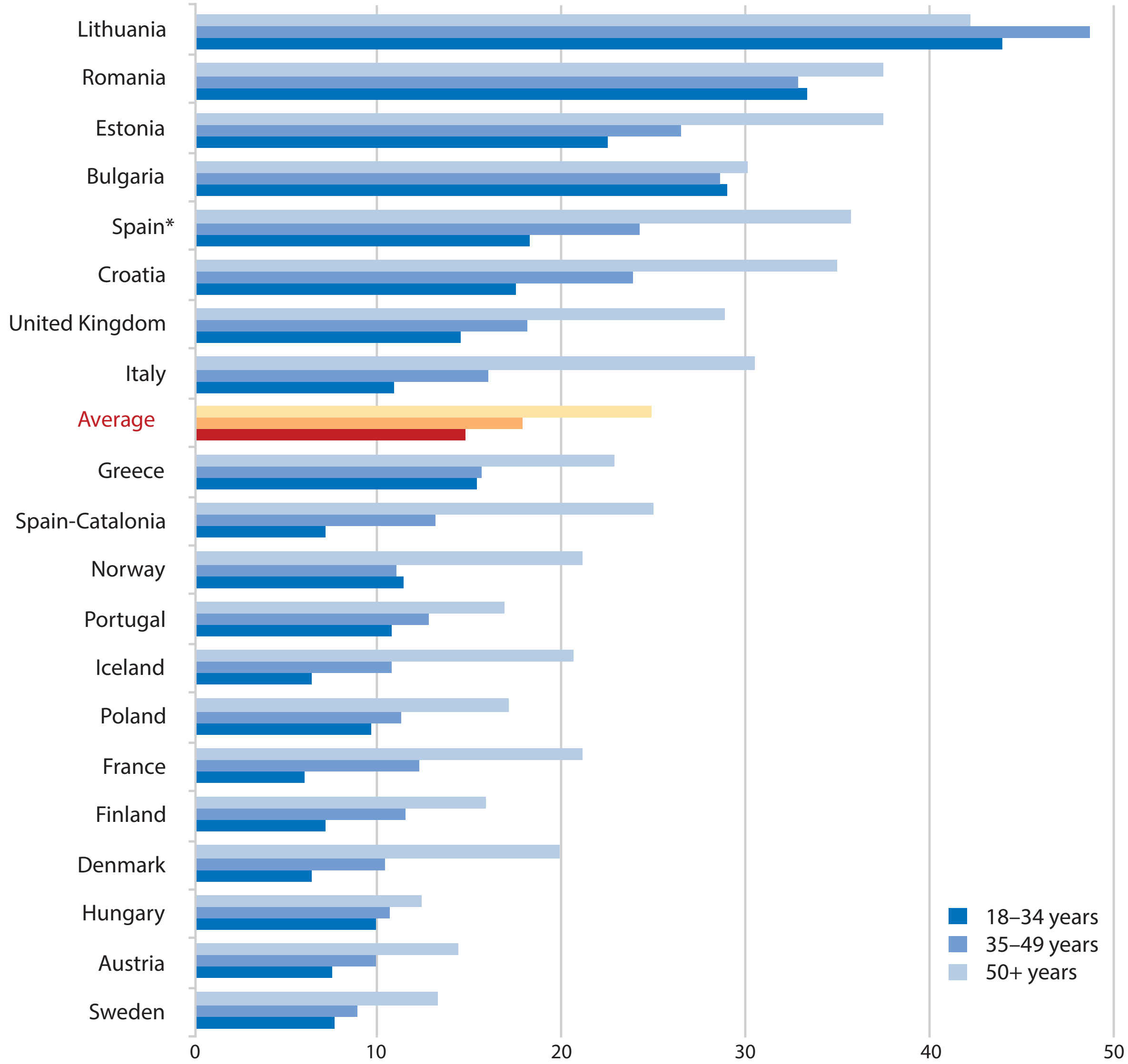
A greater percentage of younger adults, compared to middle-aged adults and older adults, experienced one or more of the four 'more serious' types of harm from others' drinking (25% vs. 18% vs. 15%). Again, the age group differences tended to be greater in countries with a low to moderate prevalence of the 'more serious' types of harm compared to those countries with a high prevalence (Figure A3.7.9). Whilst Estonia and Spain are an exception, in many high-prevalence countries (i.e. Lithuania, Romania and Bulgaria), the difference in the percentage of younger adults, middle-aged adults and older adults who experienced the 'more serious' harm items is relatively small.

Figure A3.7.9. Prevalence (%) of experiencing any of four more serious harms^ because of other people's drinking in the last 12 months in younger, middle and older-aged adults



Denominator: All respondents, excluding respondents who did not report whether they experienced harm (N = 32,990).

^ 'Harmed physically', 'in a serious argument', 'passenger with a drunk-driver' and 'in a traffic accident'.

>5% of the sample from Denmark and Iceland were excluded from the denominator due to missing data.

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Summary: Types of harm from others' drinking

In summary, a slight majority (55%) of Europeans have experienced at least one of the eight types of harms considered in this chapter in the last 12 months as a result of the drinking of others. Generally, the highest prevalences of harm from others' drinking, harm from known people's drinking and from strangers' drinking are observed in the Central Eastern and Eastern European countries of Bulgaria, Estonia, Lithuania and Romania, and in the United Kingdom, in Western Europe. As these five countries also ranked highest for mean harm score from others' drinking, a high prevalence of these types of harms does appear to translate to a high average severity of harm from others' drinking across the population.

Prevalence and severity of harm from others' drinking appeared to vary within European regions, thus preventing a clear identification of less harmful and more harmful patterns by regions based on analysis of the eight harm items. For example, in contrast to the aforementioned Central Eastern and Eastern European countries, Croatia, Hungary and Poland commonly ranked among the countries with the lowest prevalence of the types of harms from others' drinking and lowest mean harm score from others' drinking. Central-Western and Western European, Southern European and Nordic countries mostly reported relatively moderate prevalence and severity of harm from others' drinking, but this varied between countries within each region.

Averaging the mean harm scores from all included countries, females reported more negative effects than men as a result of experiencing any of the eight types of harms from others' drinking. However, a greater proportion of men reported experiencing the four apparently 'more-serious' types of harms from others' drinking. Thus, it may be that women more frequently experience these harm items than men (i.e. one person might experience a harm item on a greater number of occasions; resulting in greater negative effects from that item and overall), or it may be that they perceive more harms, or even that they are more likely to perceive harms as being due to the drinking of others.

Averaging the estimates from all included countries, a higher prevalence and severity of harm from others' drinking was reported in younger adults compared to middle-aged adults and older adults. However, this effect was not evident in all countries. In most of those aforementioned countries reporting high prevalence and severity of harm from others' drinking, the difference in prevalence and severity of harm between age group was less pronounced, and in Bulgaria, Lithuania and Romania, harm appeared to increase with increasing age. Gender and age group differences may contribute to country-level and region-level differences in prevalence of severity of harm experienced because of others' drinking.

Harm to children because of others' drinking

On a population level, it can be difficult to assess the alcohol-related harm to children in families with alcohol problems. The degree of harm to the child is affected not only by the quantity of alcohol consumed by the parents but also by their drinking pattern (Lindgaard 2008). Therefore, harms to children of subclinical parental drinking may not easily be identified and assessed (Rossow et al. 2015, Rossow et al. 2016). However, evidence exists that alcohol consumption, even in the absence of dependence or abuse, may change how parents behave around their children: Alcohol affects the central nervous system, can cause changes in mood, impaired cognition, increased levels of impulsivity and aggression, all of which may contribute to poorer parenting. For example, parents under the influence of alcohol may become less attentive to their children's needs and misinterpret communication and situations. Ultimately, this may lead to verbal conflicts and/or physical harms to the child (Rossow et al. 2009, Torvik & Rognmo 2011). Although it has been less studied, the alcohol use of other persons living in the household may similarly cause alcohol-related harm to children, which may track into adulthood.

Children who grew up in homes with alcohol problems have been shown to be prone to later adverse effects in several areas in life, including substance abuse, behavioural problems, and poor physical and mental health (Seilhamer & Jacob 1990, Johnson & Leff 1999, Manning et al. 2009, Lund et al. 2015). Gender-specific consequences have been shown in a Danish study for boys and girls of parents with alcohol dependence or abuse (Christoffersen & Soothhill

2003). Whereas boys tended to display externalising coping strategies such as anger, violence, and criminal activity, girls were more likely to internalise experiences into feelings of guilt and anxiety and engage in promiscuous behaviours. Both boys and girls with alcoholic parents are, however, at greater risk of developing alcohol abuse (Christoffersen & Soothhill 2003). In a study by Anda et al. (2002), a higher prevalence of adult women than men (22.8% vs. 17.4%) reported growing up with a problem drinker or alcoholic, potentially indicating gender-specific perceptions of whether parents had an alcohol problem.

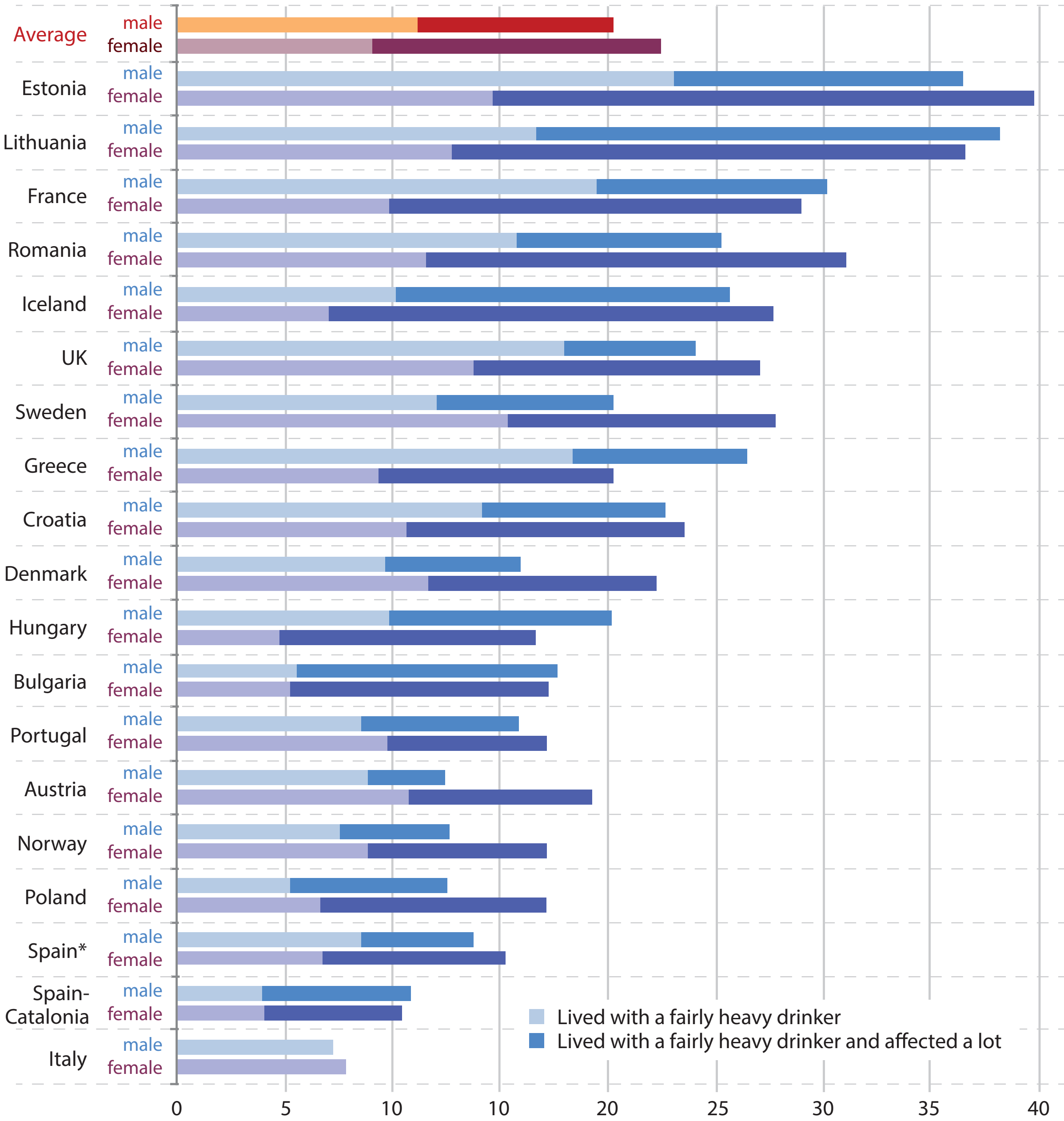
Beyond the importance of obtaining better assessments of the overall health and social burden attributable to alcohol, such knowledge may be important when planning alcohol policies and prevention and intervention strategies aiming at reducing alcohol-related harm both in general and especially among vulnerable groups, such as children, who suffer harms from others' drinking (Lund et al. 2015).

By including questions on alcohol-related harm experienced during childhood among the general adult population, the RARHA SEAS has the capacity to ascertain the time order of exposure and outcome and, thus, rule out reverse causality. Moreover, responses from general population surveys provide an insight into the prevalence and distribution of alcohol-related harm among those experiencing both subclinical and clinical parental drinking during childhood and/or adolescence. A possible weakness of the present study is, however, that it relies on the accuracy of retrospective and often long-term recall by the respondents of events that may not any longer have an impact on the respondent's life.

In the present survey, the respondents were asked if they, as a child or teenager, lived with someone whom they considered to be a fairly heavy drinkers or someone who drank a lot. Then, those who reported living with a fairly heavy drinker during childhood and/or adolescence were asked how much they were negatively affected by this or these persons' drinking (a lot/a little/or not affected at all).

As can be seen from Figure A3.7.10, there is a large variation among European countries in the prevalence of persons who lived with a fairly heavy drinker or someone who drank a lot sometimes during the respondent's childhood. The highest prevalence was found in the Baltic countries (Estonia – 36.4% among men and 39.7% among women, and Lithuania – 38.1% among men and 36.5% among women) and France (men: 30.1%; women: 28.9%). In contrast, the problem seems to be less frequent in the southern European region. Hence, the lowest prevalence was noted in Italy (men: 7.2%; women: 7.8%), followed in ascending order by Spain-Catalonia (men: 10.8%; women: 10.4%) and Spain (men: 13.7%; women: 15.2%). In a majority of surveys, women were a little more likely than men to report having lived with a heavy drinker, but the rate was higher for men in Lithuania, Croatia, Belgium, the UK and Spain-Catalonia. The figure also shows the prevalence of persons who were negatively affected a lot by this or these person's/persons' drinking (Figure A3.7.10). Those who reported being negatively affected at all were generally a little under half of those who had lived with a heavy drinker when young, with some variations – thus, for instance, the proportion was substantially less than half in France. Generally, more than half of those who had been affected at all reported that they had been negatively affected 'a lot'. In general, there is substantial cultural variation in whether respondents report living with a heavy drinker while young, with the variations more or less corresponding to variations in problematic drinking and adverse effects on other adults. But there seems to be little cultural variation, among those who lived with a heavy drinker, in the proportions reporting that this had adverse effects on them as a child or adolescent. Furthermore, Table A3.7.8 shows the prevalence of being affected 'a lot' by sex and age group. The prevalence was higher among women than among men in most countries. No clear pattern was observed by age.

Figure A3.7.10. Prevalence of individuals living with fairly heavy drinkers or someone who drank a lot during childhood or teenage years. Individuals affected a lot are marked with darker colours



Note: Data not available for Finland. Data on how it affected the individuals were not available for Italy.

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Table A3.7.8. Prevalence of individuals being negatively affected a lot by living with fairly heavy drinkers or someone who drank a lot during childhood or teenage years by sex and age

	Men				Women			
	18–34 years	35–49 years	50+ years	All men	18–34 years	35–49 years	50+ years	All women
Austria	1.9	4.3	4.7	3.6	5.7	9.6	10.3	8.5
Bulgaria	11.7	12.3	12.2	12.1	15.9	10.9	8.7	12.0
Croatia	4.7	11.1	10.2	8.5	9.3	8.7	19.9	12.9
Denmark	3.6	8.7	6.4	6.3	11.6	16.4	4.6	10.6
<u>Estonia</u>	13.1	15.4	11.7	13.4	22.1	29.4	24.3	25.1
<u>France</u>	8.5	13.8	9.9	10.7	15.2	23.8	17.8	19.1
Greece	4.6	8.4	11.6	8.1	8.1	14.0	9.4	10.9
Hungary	9.2	12.0	9.6	10.3	8.9	14.9	11.7	11.9
<u>Iceland</u>	12.5	19.5	15.1	15.5	23.5	20.9	16.8	20.6
<u>Lithuania</u>	18.0	23.1	23.9	21.5	21.0	27.1	23.4	23.8
Norway	2.8	6.4	6.3	5.1	5.6	8.8	11.1	8.3
Poland	8.2	7.1	6.3	7.3	11.4	10.2	9.7	10.5
Portugal	8.5	4.3	9.5	7.3	3.3	8.2	10.7	7.4
<u>Romania</u>	9.0	9.3	10.2	9.5	14.4	24.1	20.4	19.5
*Spain**	5.2	4.2	6.8	5.2	10.1	8.0	7.5	8.5
Spain-Catalonia	9.9	5.8	5.3	6.9	6.1	3.6	11.2	6.4
Sweden	9.6	6.6	8.1	8.2	11.0	12.0	14.8	12.4
United Kingdom	2.2	13.1	4.2	6.1	8.0	17.2	15.2	13.3
Total	**8.0**	**9.9**	**9.4**	**9.1**	**11.9**	**14.7**	**13.7**	**13.4**

Note: Data not available for Finland and Italy.
Italicized = among the bottom five countries for prevalence of being negatively affected a lot by living with fairly heavy drinkers during childhood or teenage years; underlined = among the top five countries for prevalence of being negatively affected a lot by living with fairly heavy drinkers during childhood or teenage years.
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References

Anda RF, Whitfield CL, Felitti VJ, Chapman D, Edwards VJ, Dube SR, Williamson DF (2002). Adverse childhood experiences, alcoholic parents, and later risk of alcoholism and depression. Psychiatr Serv. 53:1001–1009.

Christoffersen MN, Soothhill K (2003). The long-term consequences of parental alcohol abuse: a cohort study of children in Denmark. J Subst Abuse Treat. 25(2):107–116.

Gilbert, P. (1996). Foetal alcohol syndrome. *The A–Z Reference Book of Syndromes and Inherited Disorders.* Boston, MA: Springer US.

Horwood, L. J. & Fergusson, D. M. (2000). Drink driving and traffic accidents in young people. *Accident Analysis & Prevention,* 32**,** 805–814.

Johnson JL, Leff M (1999). Children of substance abusers: overview of research findings. Pediatrics;103:1085–99.

Laslett, A. M., Room, R., Ferris, J., Wilkinson, C., Livingston, M. & Mugavin, J. (2011). Surveying the range and magnitude of alcohol's harm to others in Australia. *Addiction,* 106**,** 1603–1611.

Lindgaard H. (2008) Familier med alkoholproblemer og deres børn – en sammenfatning (Families with alcohol problems and their children – a summary). Arbejdsnotat. Århus: TUBA.

Lund IO, Butken A, Storvoll EE, Moan IS, Skurtveit S, Handal M, Nordfjearn T, Brunborg GS, Rossow I. (2015) A cohort study on long-term adverse effects of parental drinking: Background and study design. Subst Abuse. 9(Suppl 2):77–83.

Manning V, Best DW, Faulkner N, Titherington E. (2009) New estimates of the number of children living with substance misusing parents: results from UK national household surveys. BMC Public Health;9:377.

McMurran, M. (1999). Alcohol and violence. *Child Abuse Review,* 8**,** 219–230.

Ramstedt, M., Sundin, E., Landberg, J. & Raninen, J. (2014). ANDT-bruket och dess negativa konsekvenser i den svenska befolkningen 2013–en studie med fokus på missbruk och beroende samt problem för andra än brukaren relaterat till alkohol, narkotika, dopning och tobak. Stockholm: Stockholm förebygger alkohol och drogproblem (STAD).

Ramstedt, M., Sundin, E., Moan, I. S., Storvoll, E. E., Lund, I. O., Bloomfield, K., Hope, A., Kristjánsson, S. & Tigerstedt, C. (2015). Harm experienced from the heavy drinking of family and friends in the general population: a comparative study of six Northern European countries. *Substance abuse: research and treatment,* 9**,** 107.

Rossow I, Keating P, Felix L, McCambridge P. (2016) Does parental drinking influence children's drinking? A systematic review of prospective cohort studies. Addiction. 111(2): 204–217.

Rossow I, Felix L, Keating P, McCambridge P. (2015) Parental drinking and adverse outcomes in children: A scoping review of cohort studies. Drug Alcohol Rev. doi: 10.1111/dar.12319. [Epub ahead of print].

Rossow I, Moan IS, Natvig H. (2009) Nære pårørende av alkoholmisbrukere: hvor mange er de og hvordan berøres de? Only in Norwegian. [Persons with Close Relations to Alcohol Abusers: How Many They are and How They Affected?] SIRUS; Oslo.

Seid, A. K., Grittner, U., Greenfield, T. K. & Bloomfield, K. (2015). To cause harm and to be harmed by others: new perspectives on alcohol's harms to others. *Substance abuse: research and treatment,* 9**,** 13.

Seilhamer RA, Jacob T. (2015) Family factors and adjustment of children of alcoholics. In: Windle M, Searles JS, eds. Children of alcoholics critical perspectives. New York: Guilford Press, 1990:168–86.STATA CORP. *Stata Statistical Software: Release 14,* College Station, Texas, StataCorp LP.

Torvik F, Rognmo K. (2011) Barn av foreldre med psykiske lidelser eller alkoholmisbruk: omfang og konsekvenser. Only in Norwegian. [Children of Parents with Mental Illness or Alcohol Abuse: Extent and Consequences] Oslo, Norway: Norwegian Institute of Public Health, 2011. p. 4.

Wood, K., Patterson, C., Katikireddi, S. V. & Hilton, S. (2014). Harms to 'others' from alcohol consumption in the minimum unit pricing policy debate: a qualitative content analysis of UK newspapers (2005–12). *Addiction,* 109**,** 578–584.

World Health Organization (2012). Alcohol in the European Union: Consumption, harm and policy approaches. *In:* Anderson, P., Møller, L. & Galea, G. (eds.). Copenhagen, Denmark: World Health Organisation Regional Office for Europe.

3.8 Opinions on and attitudes towards alcohol

Zsuzsanna Elekes, Jacek Moskalewicz, Zaza Tsereteli

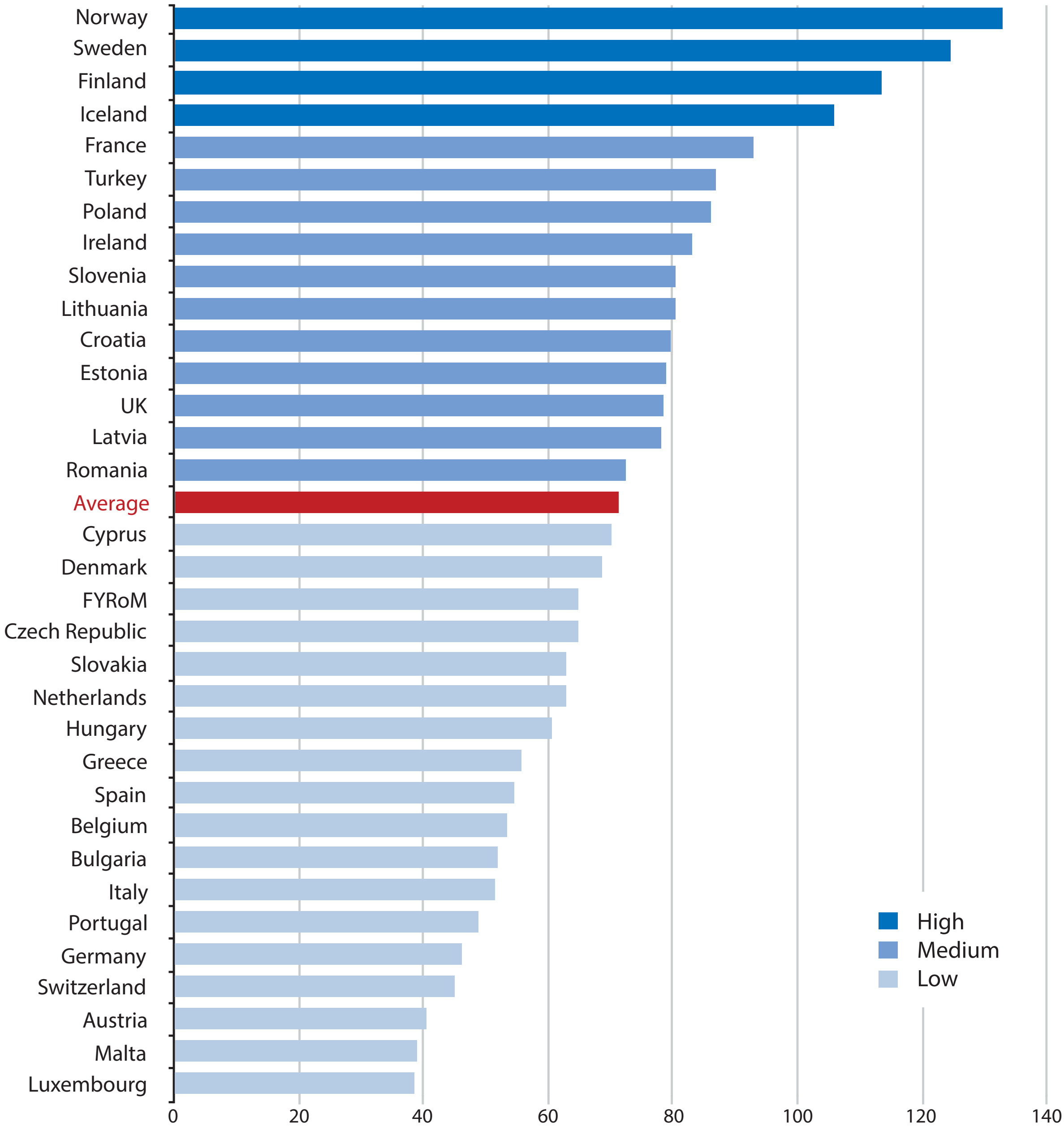
Introduction

Despite growing research evidence cumulated over the last 40 years showing that alcohol control measures should be seen and utilised as an important public health measure to reduce alcohol consumption and related problems, still national alcohol policies, if they exist at all, vary across different countries and even within countries across jurisdictions. In general, alcohol control measures recommended as efficient and cost-effective, such as limiting alcohol affordability and physical availability, are not so widely applied compared to alcohol education targeting school children, public campaigns or warning labels, whose impact on behaviour is low (Anderson and Baumberg, 2006).

Recent decades have witnessed converging trends in the level of alcohol control across Europe but still differences exist. According to an alcohol policy scale from zero to maximum 160 points elaborated by Karlsson, Lindeman and Ősterberg (2012) the gap between European countries is still huge and ranges from over one hundred points in Nordic countries to about 40 points in some Central European countries such as Germany, Austria, Switzerland or Luxembourg (Figure A3.8.1). What are the reasons for these discrepancies in alcohol policies across countries that, to a large extent, have been able to harmonise their economic and health policies and that have undergone an intensive process of cultural homogenisation? Reluctance to apply evidence-based alcohol policies could be attributed to numerous factors, first of all to vested economic interests, where private interests of the alcohol industry are combined with and reinforced by fiscal and economic considerations of national states and recognised by international bodies such as the European Commission or World Trade Organisation.

Public support for some policies and resistance to other policy measures may also have an impact on policy choices made by governments and international bodies. Because of lack of support or even more because of active resistance, some restrictive policies are very likely to fail or produce unintended side-effects.

Figure A3.8.1. The ranking of alcohol control policies across Europe



Source: Karlsson, T., Lindeman, E. & Österberg, E. (2012) Does alcohol policy make any difference? Scales and consumption. In: Anderson, P., Braddick, F., Reynolds, J. & Gual, A. (Eds) Alcohol Policy in Europe: Evidence from AMPHORA. The AMPHORA project, available online: http://amphoraproject.net/view.php?id_cont=45, Chapter 3: 15–23.

There are numerous studies that focus on public support for alcohol policies and their component measures conducted in North America and Nordic countries. However, the findings of those studies are not necessarily relevant for other cultural contexts. Moreover, most of those studies did not explore a relationship between the level of support to the existing level of alcohol control. Few times question of attitudes towards alcohol was studied by Eurobarometre across EU. In spite of ambitious title, the Eurobarometre studies were limited to a dozen or so questions on opinions on specific policy options. iincluding pricing, education, drunken driving. No attempts were made to construct attitudes towards different types of policies that may range from restrictive to liberal ones (Eurobarometre 2010). A literature review (Moskalewicz et al. 2013) found a long declining trend in support of restrictive alcohol control policies which reflects overall economic changes, including liberalisation, de-regulation, lesser State involvement in economic processes and growing powers of the private sector, including multi-national corporations. Until recently, democratic constituencies accepted these changes in economic power relationships, in particular in the countries that experienced the shortcomings of previous State-controlled, centralised economies. Over the last few years, however, the disadvantages of the new economic order have emerged in many parts of the world, leading to growing inequalities, persistent recession, a fundamental crisis of the welfare state and a sense of alienation among significant segments of society who are deprived to a large extent of their previous sense of protection and participation.

The disadvantages of liberal alcohol policies also became visible in many countries, in particular in Eastern Europe, where alcohol control systems integrated within the State-controlled economy were suddenly dismantled after 1990 and replaced by a laissez-faire approach which led to a high tide of alcohol consumption and associated problems, without much benefit to national budgets as a large part of the alcohol supply came from unrecorded sources and its producers and suppliers did not pay any taxes. Liberalisation of alcohol control also brought negative consequences in Nordic countries. They are now reinvigorating their alcohol control policies within a predominantly liberal model of economy.

The RARHA SEAS survey brought together a variety of countries representing different levels of alcohol policy, including countries with high, medium and low levels (Table A3.8.1).

Table A3.8.1. RARHA SEAS countries and their alcohol policy score

Score	Countries
High 105–133	Norway – 133 Sweden – 124 Finland – 112 Iceland – 107
Medium score (above or around European average) 69–92	France – 92 Poland – 86 Lithuania – 81 Croatia – 80 Estonia – 79 UK – 78 Romania – 72 Denmark –69
Low score (below European average) 40–69	Hungary – 60 Greece – 55 Spain – 54 Bulgaria – 52 Italy – 51 Portugal – 49 Austria – 40

Considering the existing level of alcohol control policies will offer a background for a better understanding of public support for different policy options.

The aim of this chapter is not only to present the level of support for different policy measures and options but also to identify attitudes towards alcohol policy, which may vary from readiness to support alcohol control policies to attitudes that see alcohol as an ordinary commodity whose supply does not require any special additional restrictions. This research dimension was discovered thanks to the results of the previous SMART study, which suggested the existence of specific predispositions – that varied greatly across participating countries – to support one or the other of policy options.

Methods

Questions

As already mentioned in the introductory section, the SMART project offered substantial inspiration to produce a list of questions or statements that eventually helped to identify specific attitudes towards alcohol policy. The original list of items that was pilot-tested in ten SMART partner countries was revised and some items that were not well-understood or difficult to answer for more than 10% of respondents were either reformulated or dropped altogether. Also questions with low discriminatory power were removed, such as support for restrictions on underage access to alcohol, that was supported by over 90% of all respondents.

Finally, eleven core statements were adopted to measure opinions and attitudes towards alcohol policy and in addition one optional statement.

- Alcohol is a product like any other and does not require any special restrictions.
- Adult people are responsible enough to protect themselves from harm caused by their drinking.
- Public authorities have the responsibility to protect people from being harmed by their own drinking.
- The number of places selling alcoholic beverages should be kept low in order to reduce alcohol-related harm.
- Prices of alcoholic beverages should be kept high in order to reduce alcohol-related harm.
- Alcohol education and information should be the most important policy to reduce alcohol-related harm.
- Advertising of alcoholic beverages should be banned.
- Police should be allowed to check randomly if a driver is sober or not even without any indication of drunken driving.
- Printed warnings about alcohol-related harm should be displayed on alcohol packaging.
- There should be limits on how late in the evening you can buy alcoholic beverages.
- Parents, and not legal authorities, should decide at what age their child is allowed to drink alcoholic beverages.
- Sponsoring of athletes, sport teams or sport events by the alcohol industry should be legally forbidden (optional).

Respondents were expected to express their opinions on a four point scale from strongly agree to strongly disagree in response to each of the above statements.

The intention behind the selection of the statements was to identify not only opinions but also attitudes ranging from attitudes of support for alcohol control measures to liberal attitudes opposing any restrictions on alcohol availability and affordability.

Frequencies

The first step was to compute frequencies of responses for each of the statements. Responses "strongly agree" and "somewhat agree" were added to each other as well as responses "somewhat disagree" and "strongly disagree". Percentages of "no answer" were relatively small, ranging from 1.4% to 3.4% and almost evenly distributed across all items.

Average percentages were calculated as means of results from individual countries to prevent bias related to different sample sizes.

Factor analyses

To identify underlying variables, factor analyses were performed with principal component analyses, using Varimax with the Kaiser Normalization rotation method. For factor analyses we recoded variables so that a higher value would indicate a higher supportive attitude. We excluded the last optional item from the analyses. The component matrix explained 50.97% of the total variance. KMO=0.826, Bartlett's test sig.=0.000.

The next step was to attach each factor that emerged to individual respondents. In that way each respondent obtained a specific score for each factor or policy option, which varied after normalisation from -3 to +3. To find out which policy enjoys most support in individual countries we attached the respondents to their policy option of choice, i.e. an option with the highest score. Respondents who had only negative scores, meaning that they did not express support for any option, were dropped from further analyses.

Results

Overall support for individual policy measures

Respondents' attitudes towards alcohol policy measures are fairly inconsistent. Two third of respondents strongly disagree with the statement that alcohol is a product like any other and does not require any special restriction.. In other words, the necessity of some special alcohol related restrictions is well accepted among a substantial majority of respondents. Well over 60% of respondents claim that public authorities have a responsibility to protect people from being harmed by their own drinking. On the other hand, a similar percentage is of the opinion that adult people are responsible enough and able to protect themselves from harm caused by their drinking.

Almost 90% of respondents consider alcohol education and information as possibly the most important measure in reducing alcohol-related harm, while three quarters support warning labels on alcohol containers. In addition, over 50% would support a ban on alcohol advertising.

Random breath testing enjoys very high support, as approximately 85% agree with the statements that police should be allowed to check randomly if a driver is sober or not.

Supply reduction alcohol policy enjoys support from about half of all respondents, ranging from 52% in favour of limiting hours of operation of alcohol outlets in the evening to 46% supporting high alcohol prices to reduce alcohol-related harm. In all items in this area supporters of alcohol control measures are slightly more than opponents, with the exception of pricing policy, which is opposed on average by 51% of respondents across participating countries.

There is no consensus among respondents, either, on parents' responsibility as regards onset of drinking. Almost half of respondents support the statement that parents should decide about the drinking age of their child while an almost identical percentage disagrees with this statement.

Finally, a question on banning sponsorship of sport events by the alcohol industry, asked in 14 surveys, shows a small majority in support of such a ban (53%).

Table A3.8.2. Attitudes toward alcohol policy (Mean percent of countries' estimates)

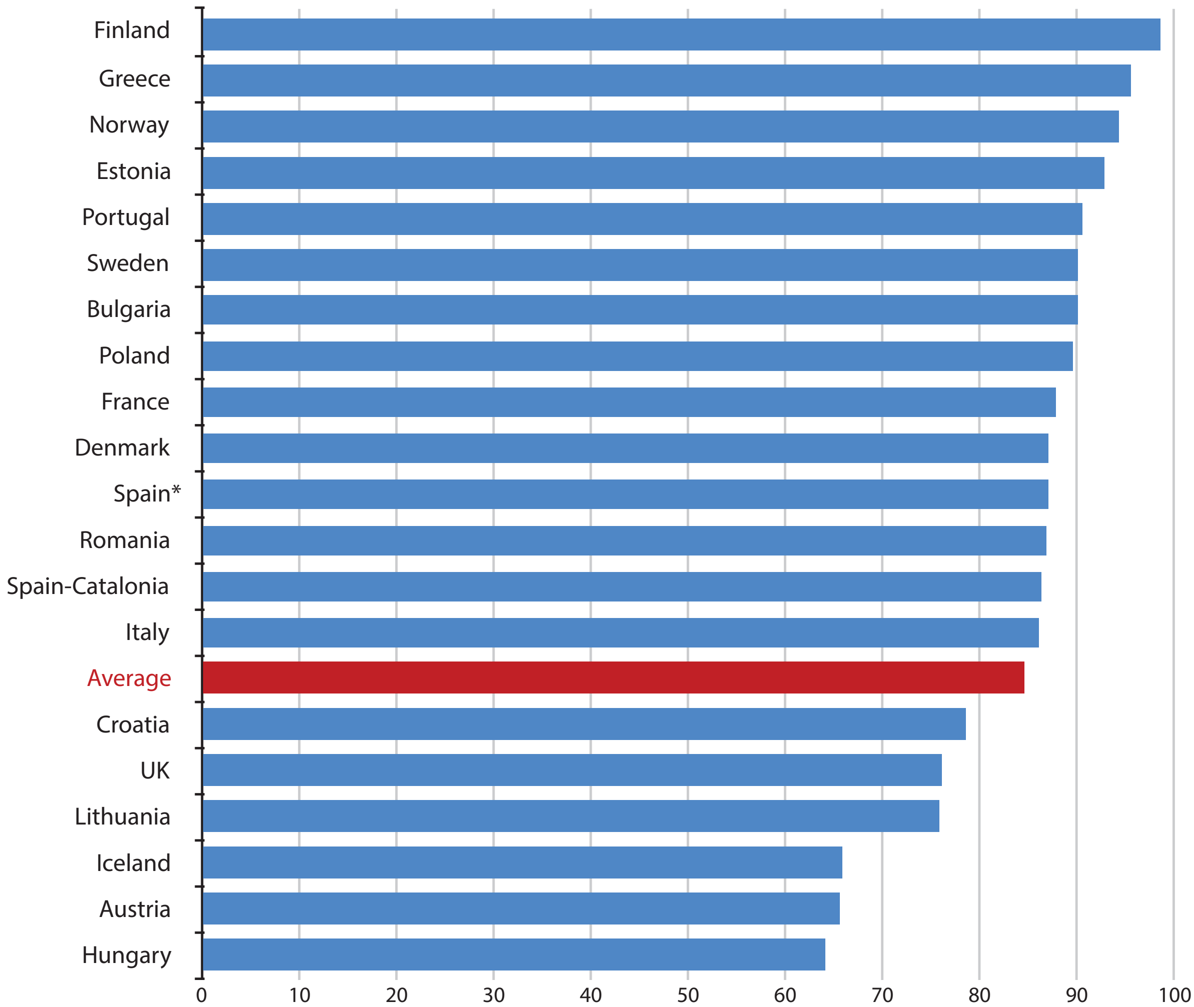
	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	No answer
AP_1. Alcohol is a product like any other and does not require any special restrictions	12.2	20.9	26.4	38.6	1.9
AP_2. Adult people are responsible enough to protect themselves from harm caused by their drinking	31.5	31.9	21.1	13.4	2.1
AP_3. Public authorities have the responsibility to protect people from being harmed by their own drinking.	24.7	36.9	20.9	14.3	3.0

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	No answer
AP_4. The number of places selling alcoholic beverages should be kept low in order to reduce alcohol-related harm	22.9	26.2	26.0	21.7	3.1
AP_5. Prices of alcoholic beverages should be kept high in order to reduce alcohol-related harm	21.2	24.8	26.3	24.6	3.1
AP_6. Alcohol education and information should be the most important policy to reduce alcohol-related harm	57.4	32.1	5.9	2.5	2.1
AP_7. Advertising of alcoholic beverages should be banned	32.7	24.4	23.4	16.1	3.4
AP_8. Police should be allowed to check randomly if a driver is sober or not even without any indication of drunken driving	61.4	23.1	7.4	6.2	1.9
AP_9. Printed warnings about alcohol-related harm should be displayed on alcohol packaging	45.3	30.1	12.9	9.1	2.6
AP_10. There should be limits on how late in the evening you can buy alcoholic beverages	28.0	24.5	21.3	23.1	3.2
AP_11. Parents, and not legal authorities, should decide at what age their child is allowed to drink alcoholic beverages	25.7	22.7	20.3	28.2	3.2
AP_12. Sponsoring of athletes, sport teams or sport events by alcohol industry should be legally forbidden (Optional – 14 countries)	**27.4**	**25.3**	**22.4**	**20.3**	4.7

Level of support for individual policy measures by countries

Policy for random breath testing to detect alcohol in drivers enjoys a very high level of support, with a European average of over 80% of support ranging from almost 100% in Finland, Norway and Greece to above 60% in Hungary, Austria, and Iceland.

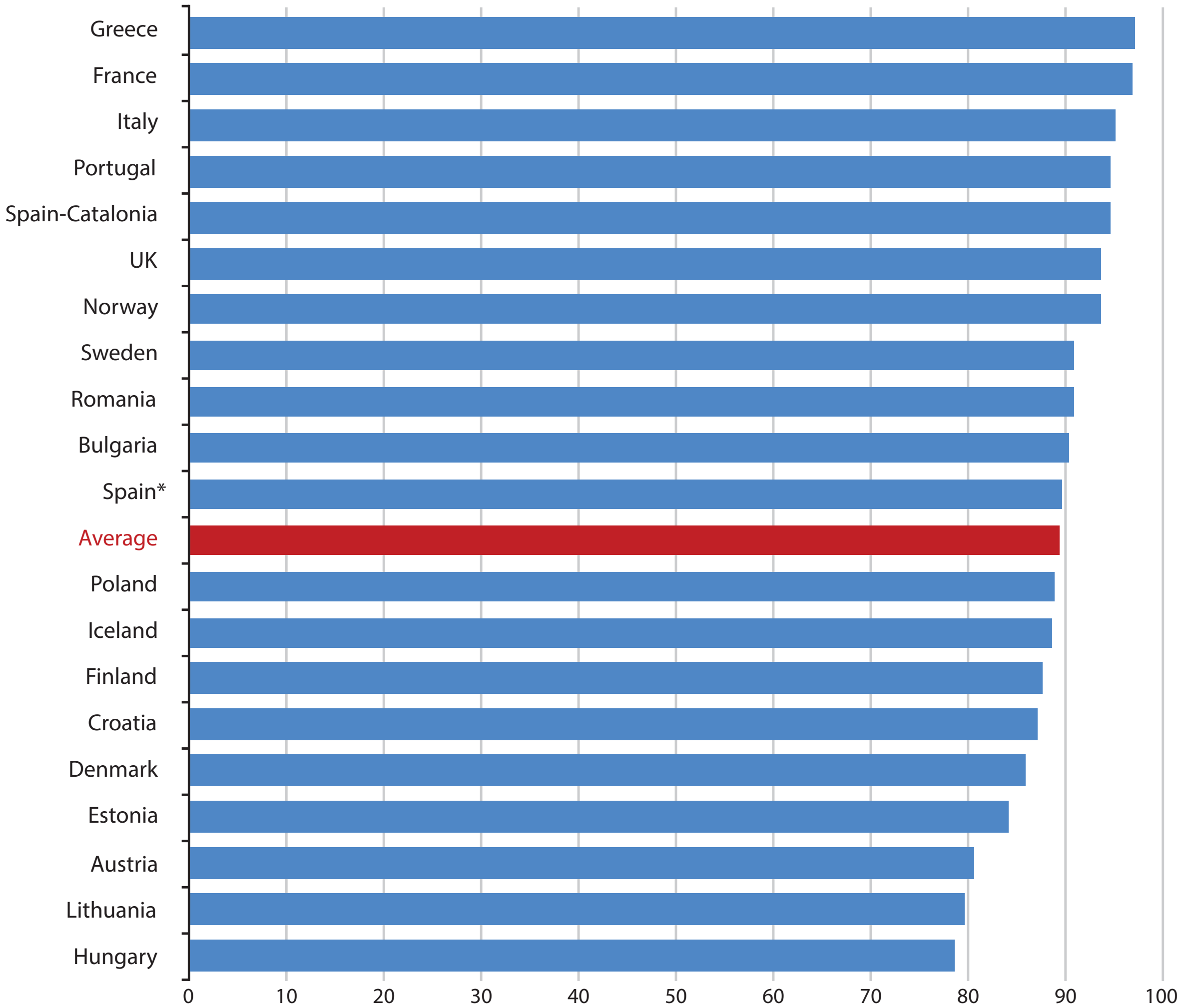
Figure A3.8.2. Police should be allowed to check randomly if a driver is sober or not even without any indication of drunken driving (proportion of answers "strongly agree" and "somewhat agree")



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The highest consensus, however, exists as regards education and information being the most important alcohol policy measure; that was supported by approximately 80% of respondents in Hungary, Lithuania, Estonia and Austria and close to 100% in Greece, France, Italy and Portugal.

Figure A3.8.3. Alcohol education and information should be the most important policy to reduce alcohol-related harm (proportion of answers "strongly agree" and "somewhat agree")



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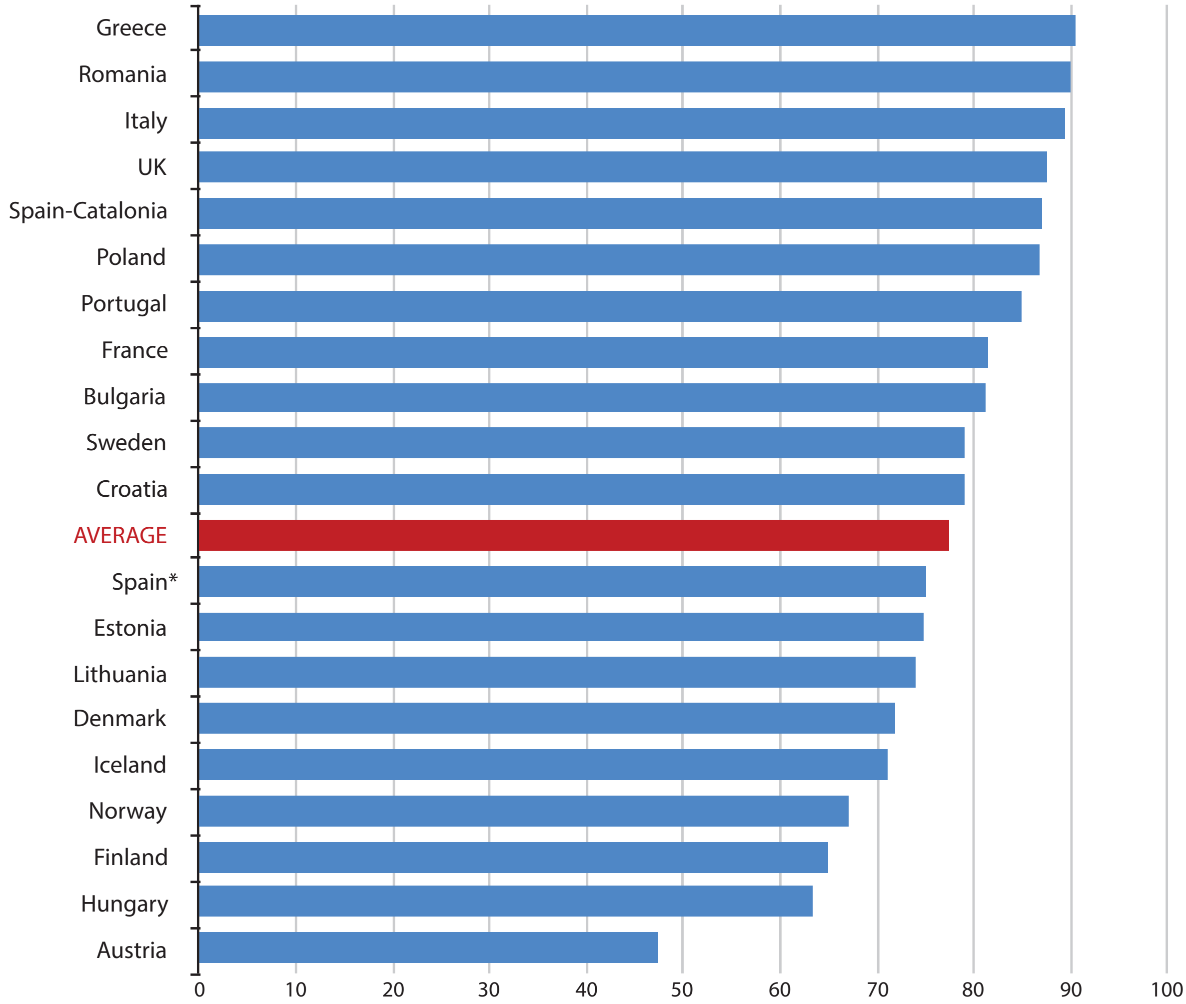
The acceptance of printed warnings about alcohol-related harm on alcohol packaging is very high according to some surveys (ranging from 80 to 90 per cent in Greece, Italy, Romania, Spain-Catalonia[1], UK, Poland, Portugal, France and Bulgaria). In some other surveys, however, less than two thirds of respondents support this policy measure (Finland, Denmark, Hungary, Iceland); only in Austria is the level of support lower than 50%.

Figure A3.8.4. Printed warnings about alcohol-related harm should be displayed on alcohol packaging

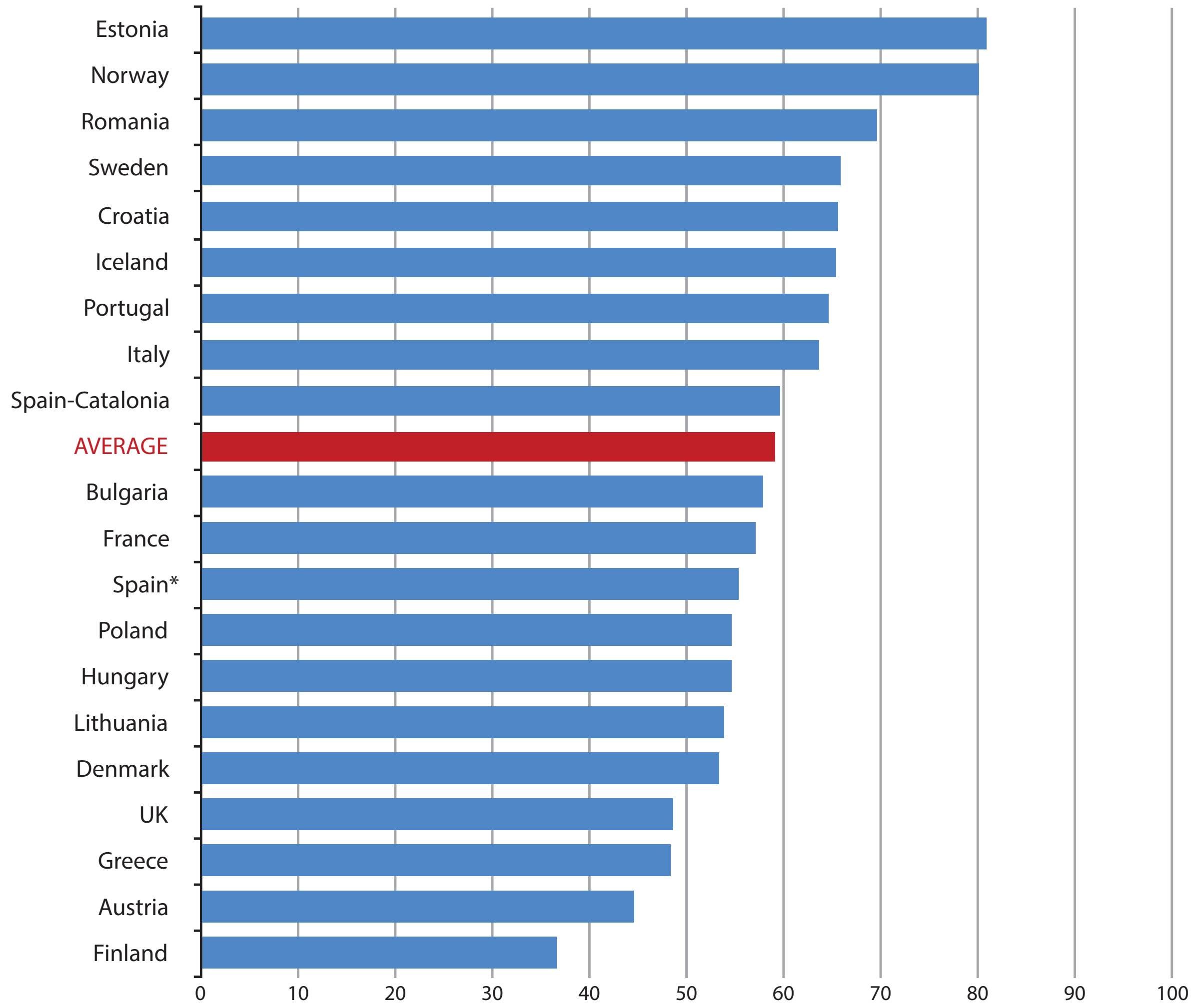


* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

In addition to favouring printed warnings, the majority of respondents is in favour of banning alcohol advertising . The majority of respondents in fifteen jurisdictions, in particular, Estonia, Norway, Sweden and Romania, approve it. On the other hand, Finland seems to be less enthusiastic, with only one third supporting an alcohol-advertising ban.

Figure A3.8.5. Advertising of alcoholic beverages should be banned



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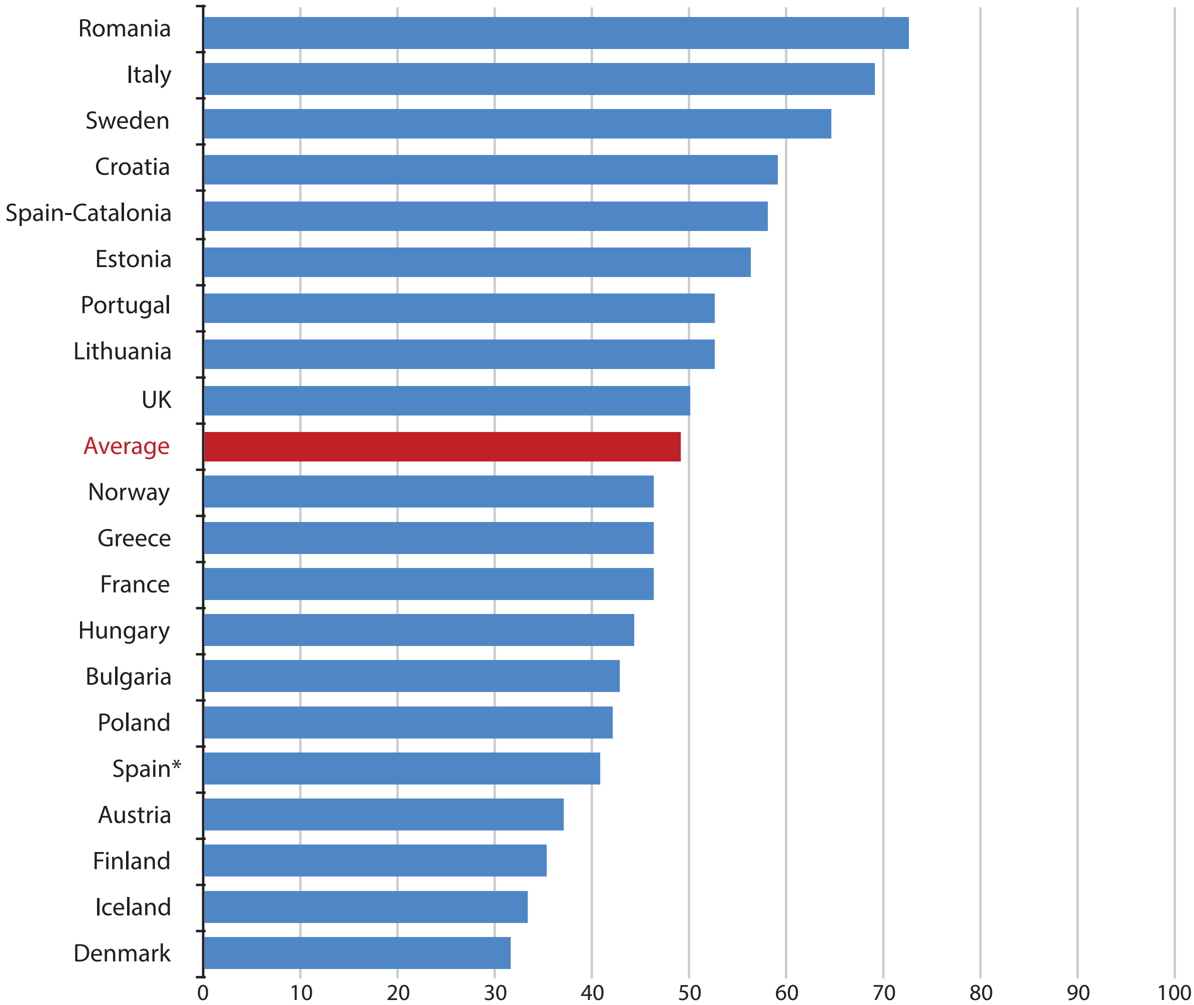
As mentioned earlier, availability control, namely restricting the network of alcohol outlets, is supported by a bit less than 50% of respondents. The level of support, however, varies substantially, from over two thirds in Romania, Italy, Sweden to approximately one third in Denmark, Iceland and Finland.

Figure A3.8.6. The number of places selling alcoholic beverages should be kept low in order to reduce alcohol-related harm (proportion of answers "strongly agree" and "somewhat agree")



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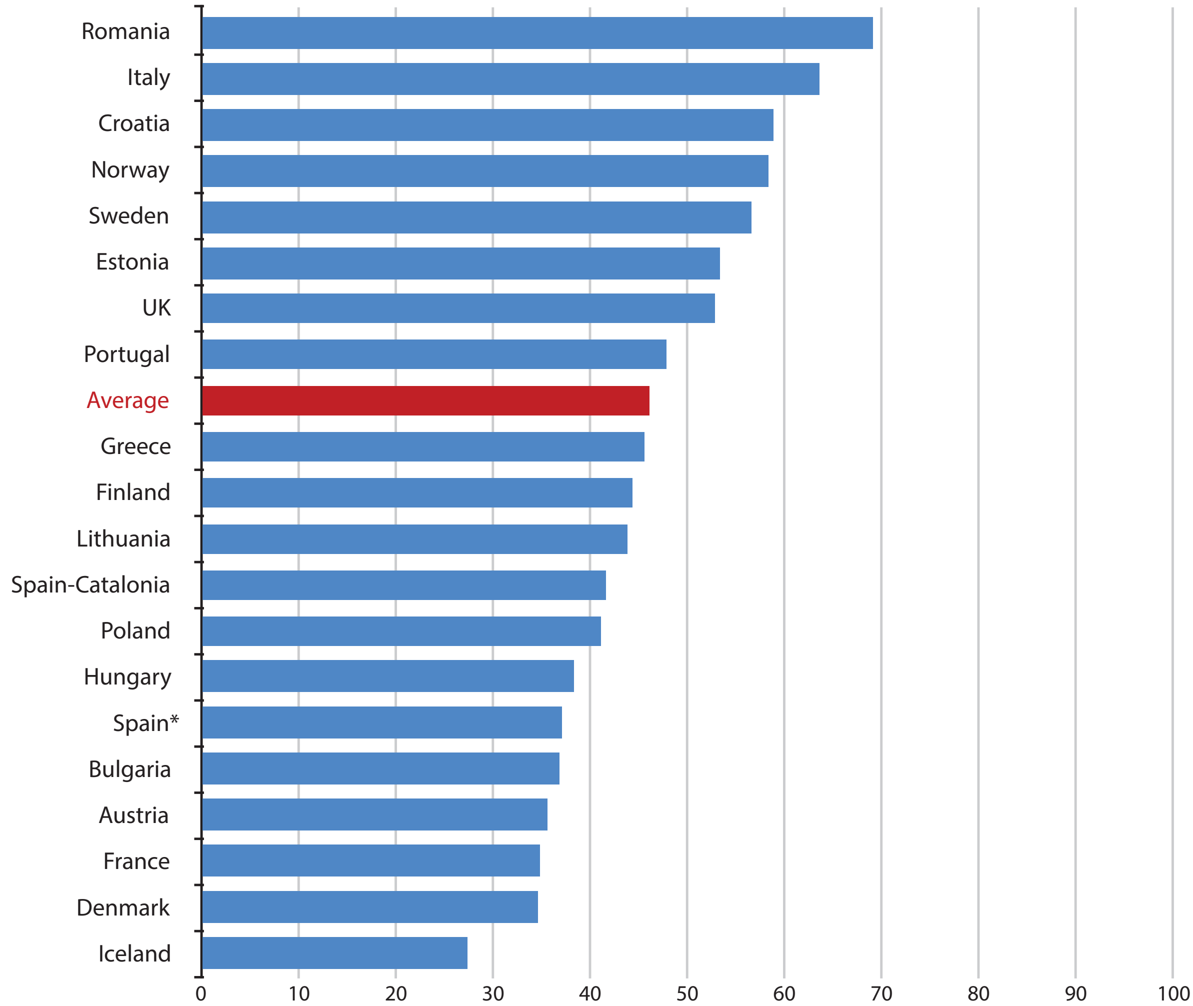
The other supply control measure – price control – is also accepted by a high proportion of respondents from Romania, Italy and Sweden, as well as in Croatia and Norway. In addition, restrictive pricing policy is supported by approximately 50% of respondents in Estonia, UK and Portugal.

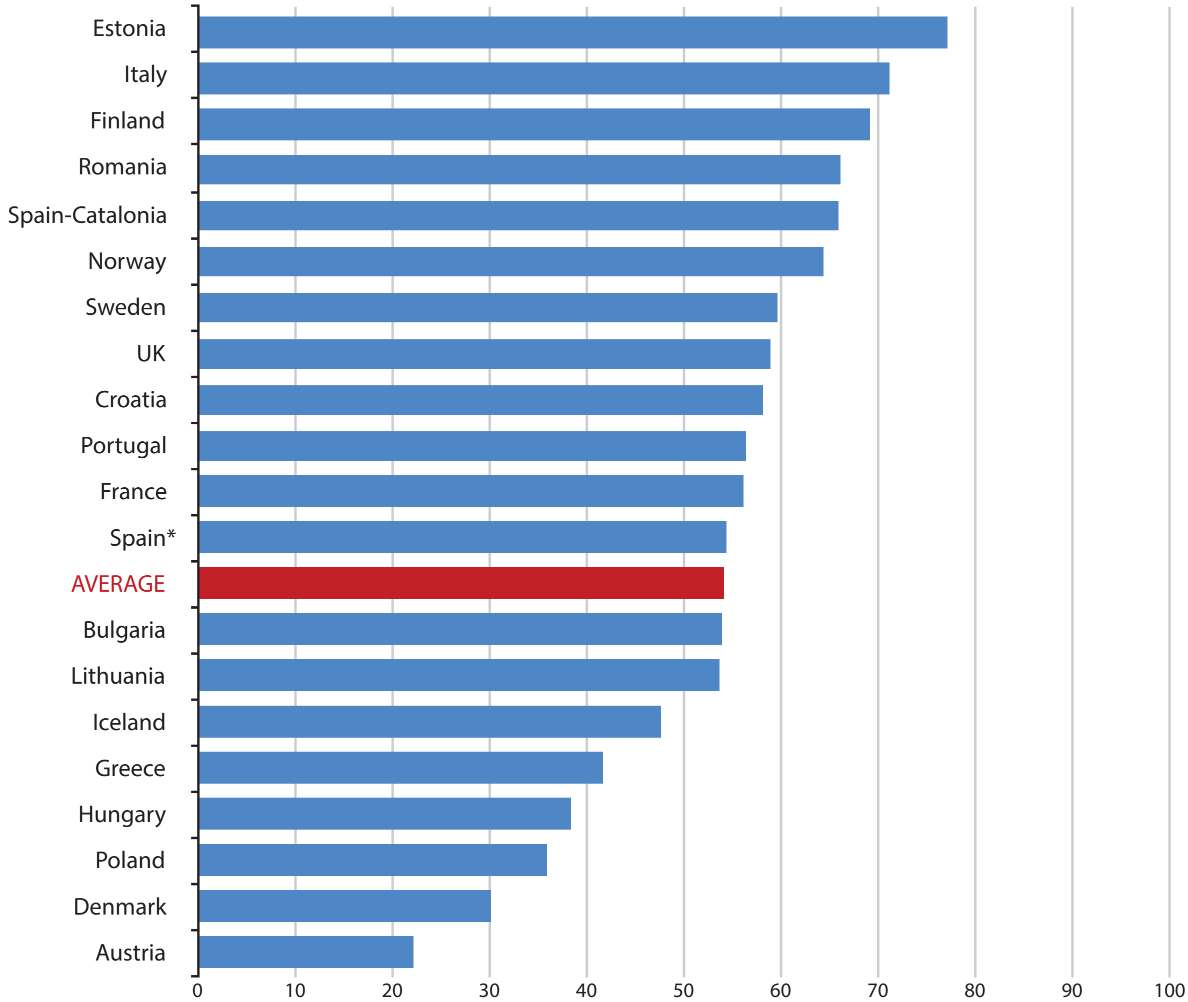
Figure A3.8.7. Prices of alcoholic beverages should be kept high in order to reduce alcohol-related harm (proportion of answers "strongly agree" and "somewhat agree")



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia

Countries are characterised by very different attitudes in relation to the regulation of late evening alcohol sales. In general, the majority of respondents support it, in particular in Estonia, Italy and Finland, where the level of support is approximately 70%. On the other hand, in Austria it is just above 20%, while in Denmark, Poland and Hungary it is between 30 and 40% of respondents.

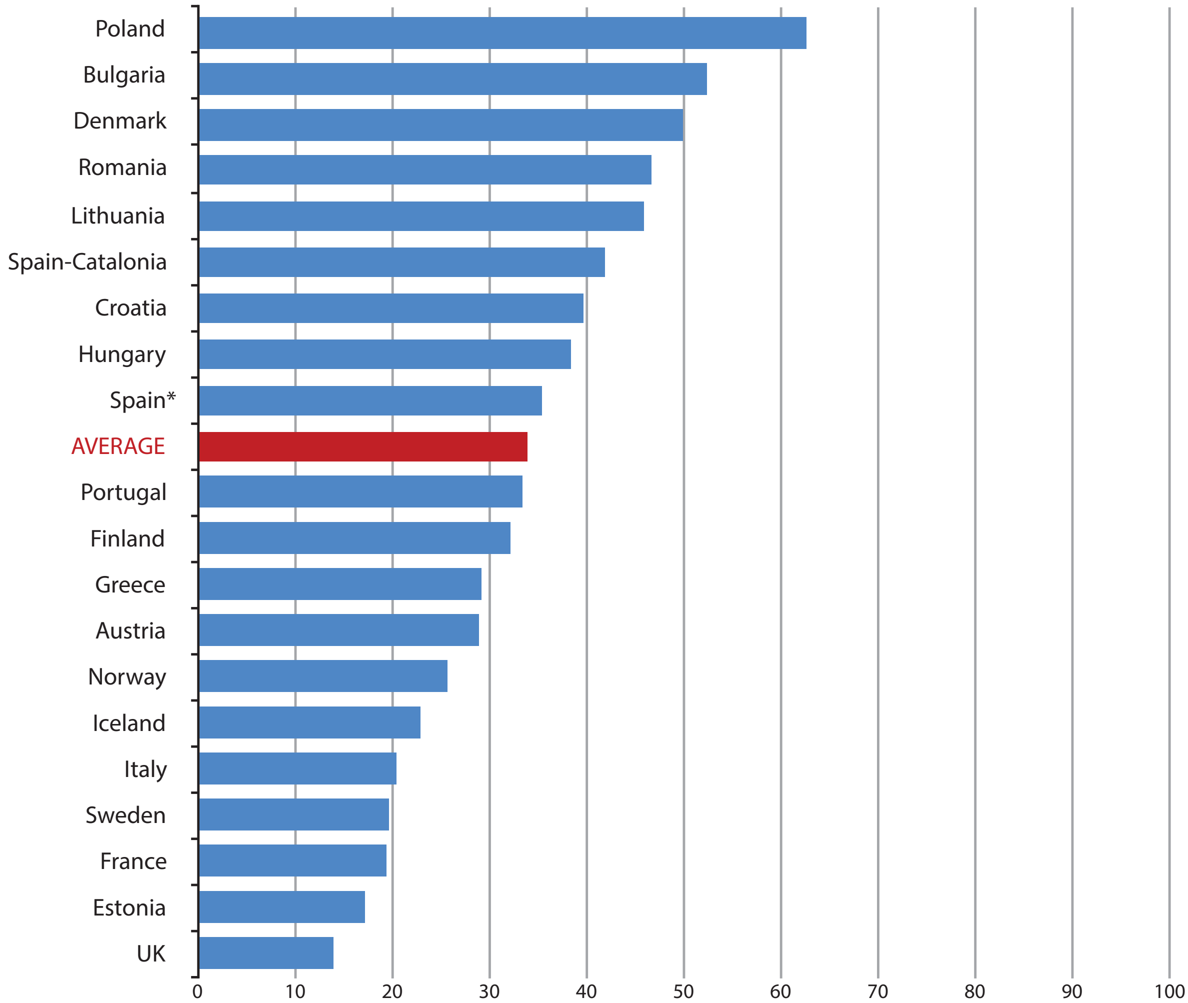
Figure A3.8.8. There should be limits on how late in the evening you can buy alcoholic beverages



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia

Judgments on the core statement "alcohol is a product like any other" differ very much by country. It is most supported by the Polish respondents (over 60%) and respondents from Bulgaria (just over 50%). However, supporters of the "laissez faire" approach constitute only approximately 20% or less in Iceland, Italy, France, Sweden, Estonia and UK.

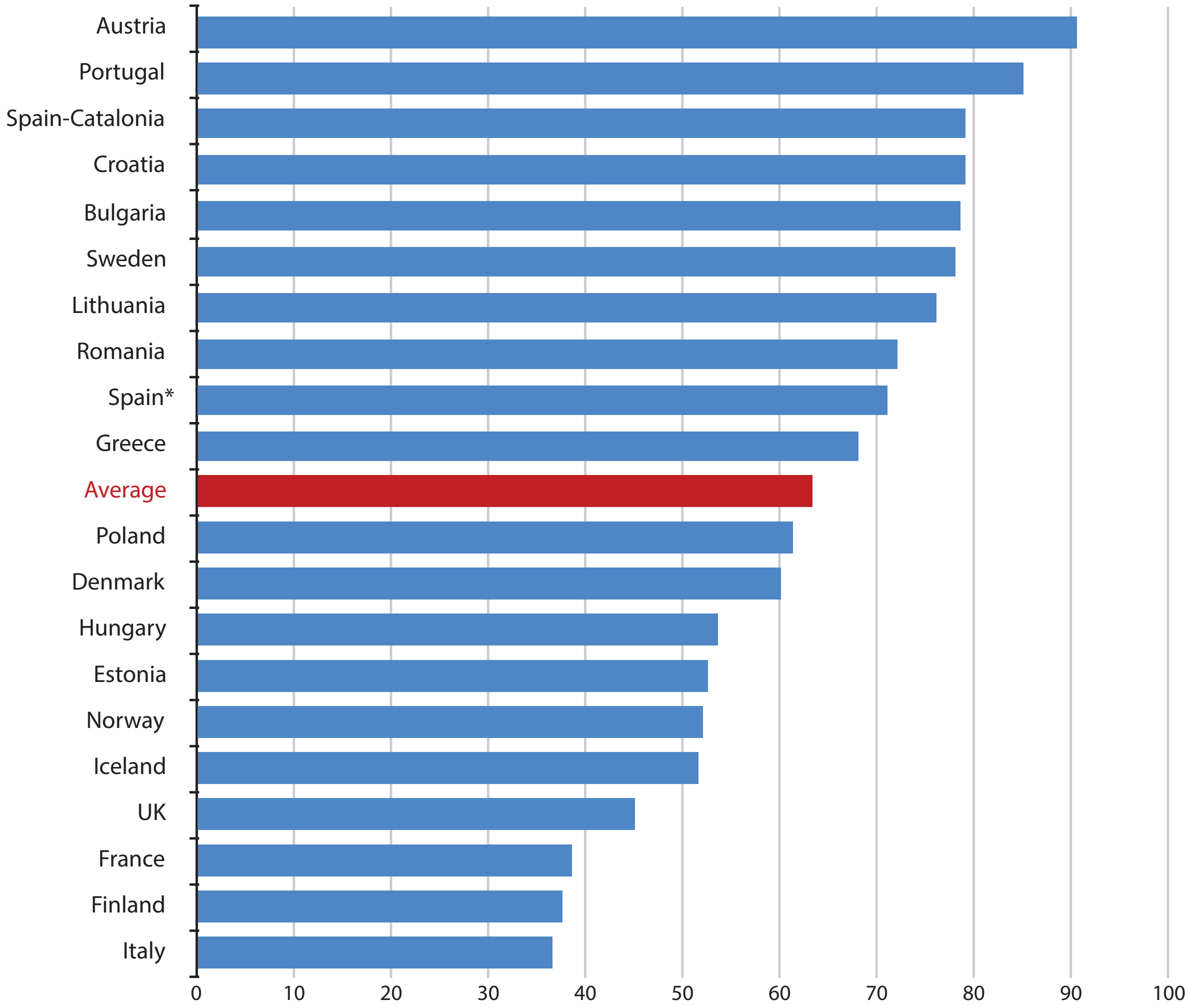
Figure A3.8.9. Alcohol is a product like any other and does not require any special restrictions (proportion of answers "strongly agree" and "somewhat agree")



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Despite relatively low support for the "laissez faire" approach in the majority of countries, respondents also support a statement that adult people are responsible enough to protect themselves from harm caused by their drinking. In 16 out of 20 jurisdictions more than half of the respondents consider adults "responsible enough". The proportion of supportive respondents is highest in Austria and Portugal and lowest in France, Finland and Italy (below 40%).

Figure A3.8.10. Adult people are responsible enough to protect themselves from harm caused by their drinking (proportion of answers "strongly agree" and "somewhat agree")

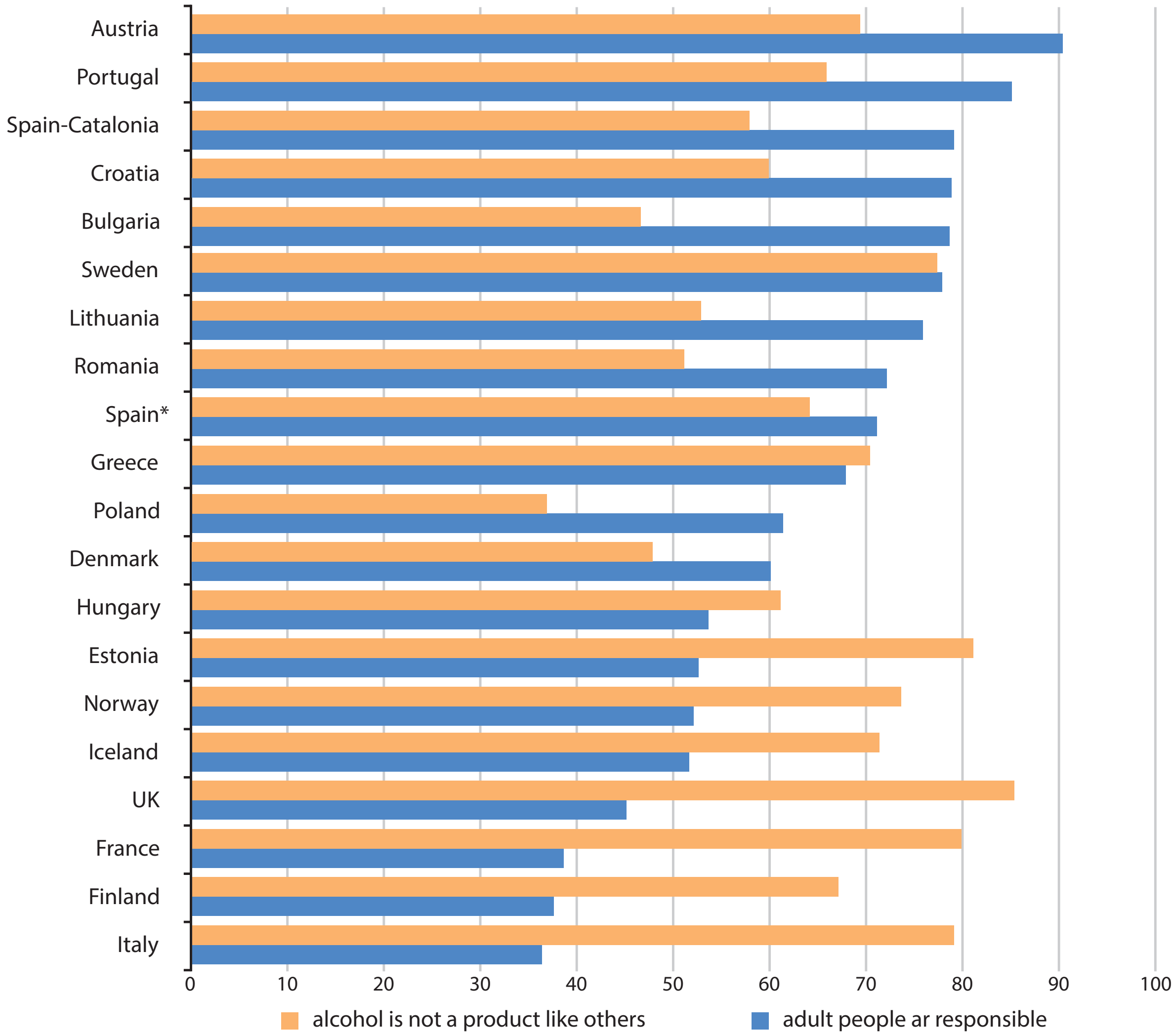


* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

When we compare the proportion of those who agree with the statement about responsible behaviour of adult people (representing a liberal attitude) with the proportion of those who disagree with the statement that alcohol is a product like any other (restrictive attitude) we can distinguish different groups of countries.

There are relatively "consistent" restrictive countries where the proportion of liberal answers is low and that of restrictive answers is high, like Estonia, Finland, France, Iceland, Italy, Norway, and the UK. A number of other countries represent a "consistent" liberal approach as the proportion of liberal answers is high and that of restrictive answers is low. These jurisdictions include Austria, Bulgaria, Croatia, Denmark, Lithuania, Poland, Portugal, Romania, and Spain-Catalonia. Finally, in Greece, Hungary, Spain, and Sweden both apparently opposite statements enjoy a similar amount of support.

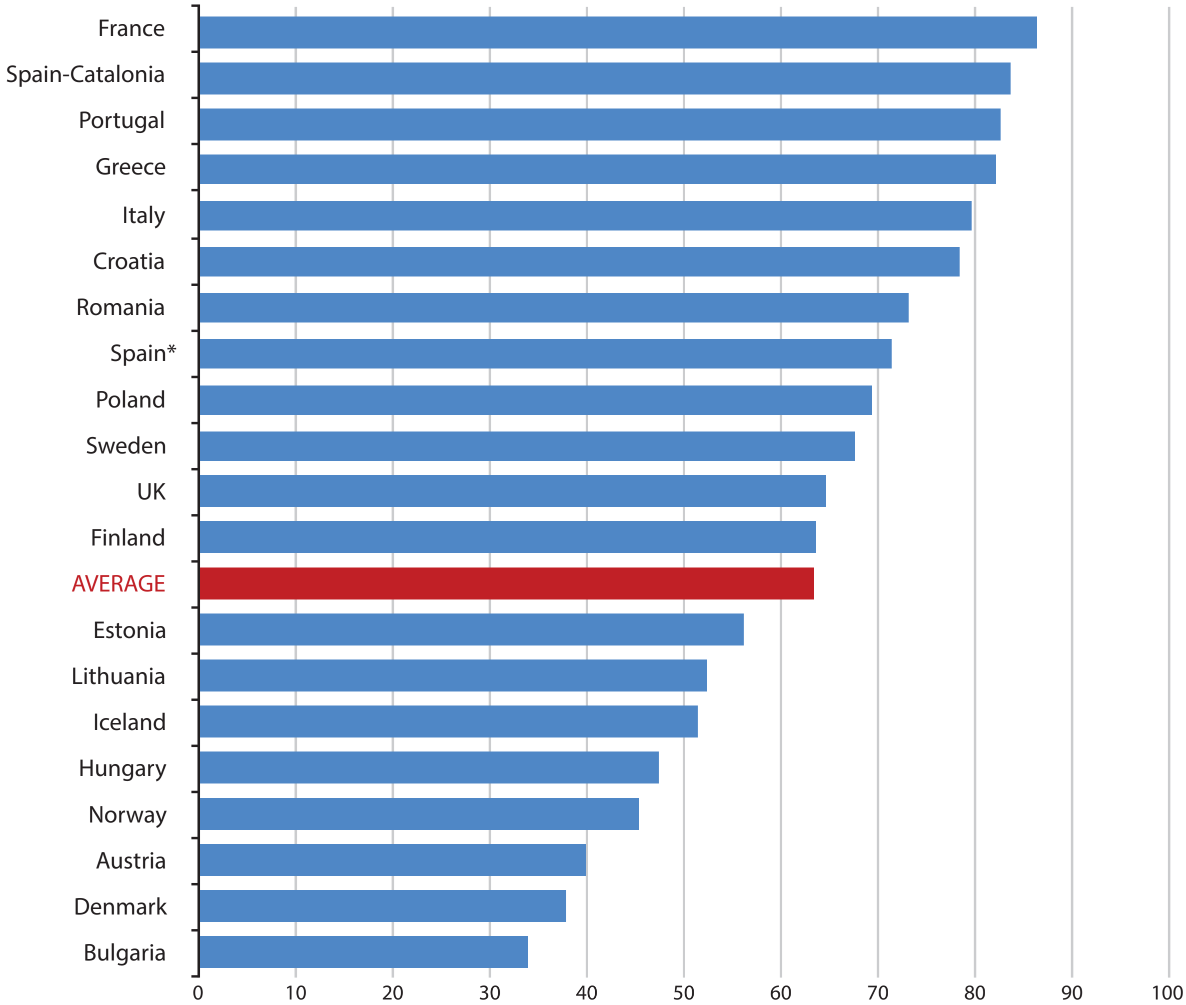
Figure A3.8.11. Proportion of those who agree with the statement about responsible behaviour of adult people and the proportion of those who disagree with the statement that alcohol is a product like any other



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The majority of respondents express high expectations as regards public authorities' role in protecting people from alcohol harms, in particular in France, Spain-Catalonia, Portugal, Greece, Italy and Croatia. In twelve out of 20 jurisdictions over 50% of respondents support this statement. Only in Hungary, Austria, Norway, Denmark and Bulgaria do supporters of public responsibility constitute a minority of respondents.

Figure A3.8.12. Public authorities have the responsibility to protect people from being harmed by their own drinking



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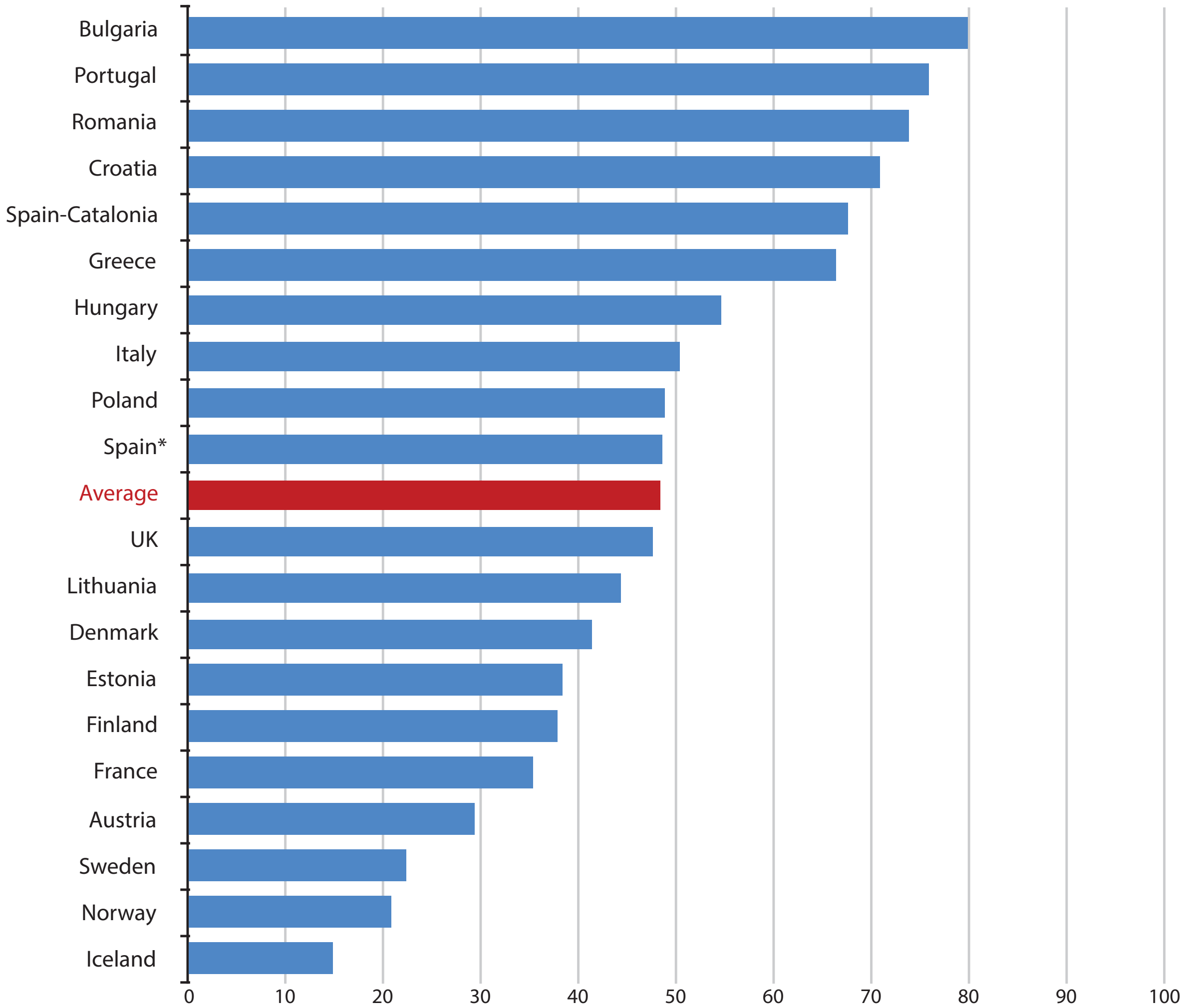
The proportion of those who agreed with the statement "parents, and not legal authorities, should decide at what age their child is allowed to drink alcoholic beverages" varies between 15% (Iceland) and 80% (Bulgaria). Countries where a higher proportion of respondents agree with the parents' right to decide are Bulgaria, Portugal, Romania and Croatia. Countries where the parents' right is less supported are: Iceland, Norway, Sweden and Austria.

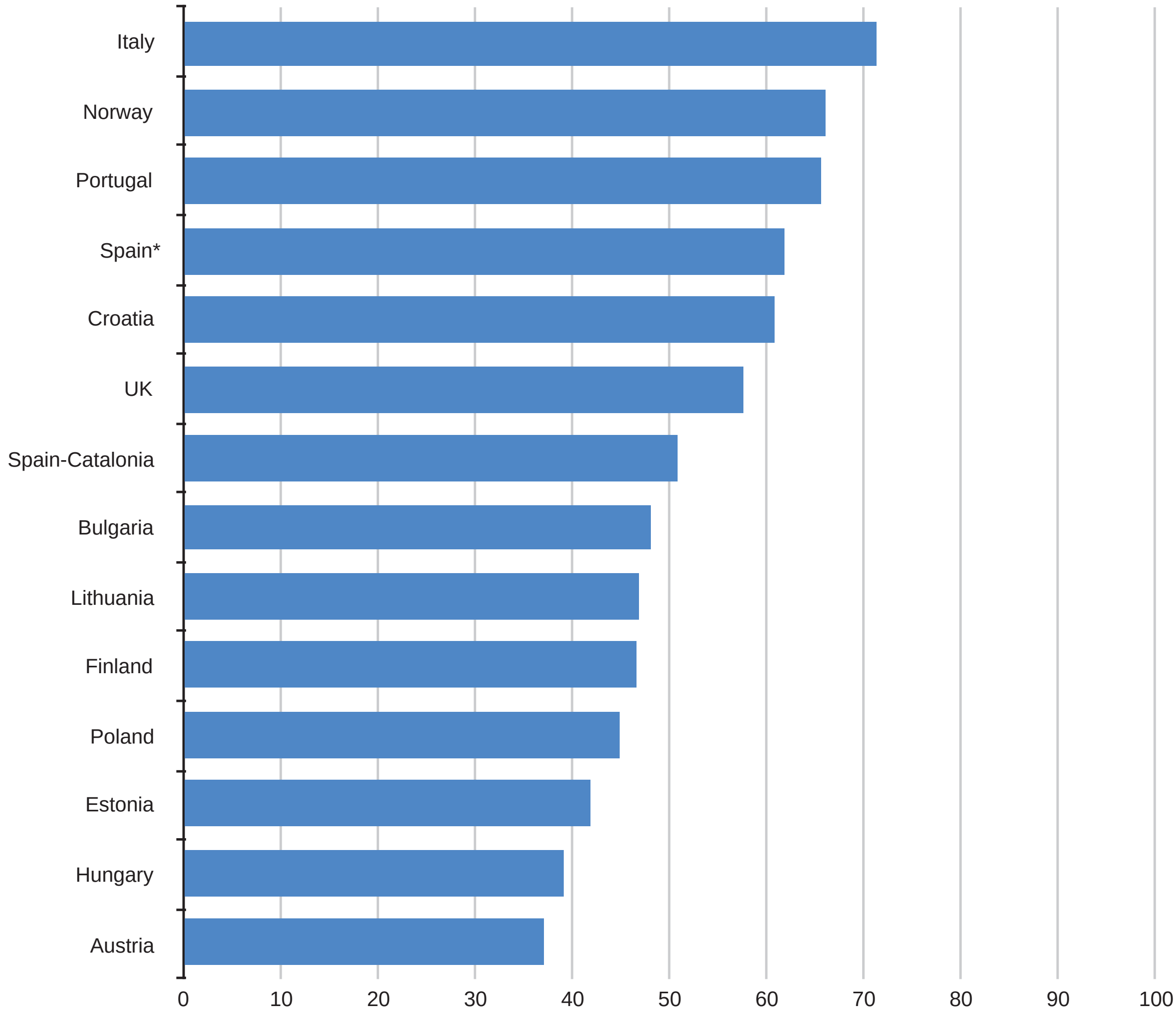
Figure A3.8.13. Parents, and not legal authorities, should decide at what age their child is allowed to drink alcoholic beverages (proportion of answers "strongly agree" and "somewhat agree")



* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The proportion of those who agreed with the statement that "sponsoring of athletes, sport teams or sport events by the alcohol industry should be legally forbidden varies between 37% and 71%. The proportion of supportive respondents is the highest in Italy, Norway, Portugal Spain and Croatia (above 60%) and the lowest in Hungary and Austria (below 40%).

Figure A3.8.14. Sponsoring of athletes, sport teams or sport events by alcohol industry should be legally forbidden (proportion of answers "strongly agree" and "somewhat agree") (Optional – 14 countries)



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Factor analyses, typology, cluster of items

As can be seen from the table below three factors emerged in factor analysis indicative of attitudes or opinions towards alcohol policy.

1. **Supportive for population based alcohol control policies**, including support for controlling number of places selling alcohol, high alcohol prices, banning alcohol advertising, limiting late evening alcohol purchases and public authority responsibility.
2. **Supportive for education and individually based alcohol policies**, including support for alcohol education and information, random breath testing and some support for printed warnings about alcohol related harms.
3. **Supportive for laissez faire alcohol policies** including perception of alcohol as ordinary commodity, support for individual responsibility to protect yourself against alcohol harm and parents' responsibility about the age of their child's drinking.

Table A3.8.3. Rotated component matrix

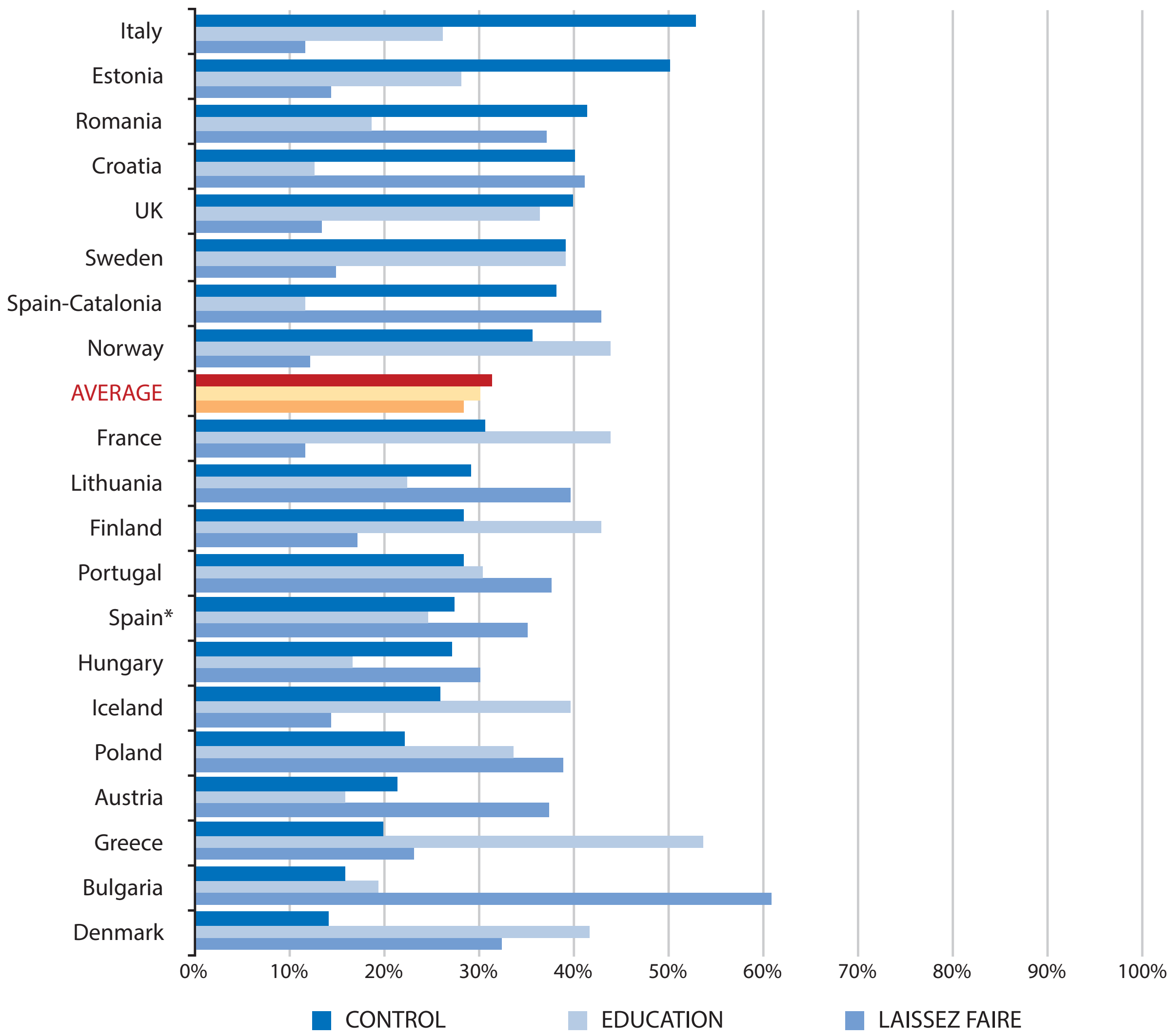
	Component		
	1	2	3
Alcohol is commodity as any other	-0.256	-0.085	0.684
Individuals are responsible enough	-0.120	-0.003	0.706
Public authorities have a responsibility	0.446	0.257	-0.080
Number of places selling alcohol should be kept low	0.807	0.045	-0.033
Alcohol prices should be kept high	0.774	0.050	-0.036
Alcohol education and information should be the most important policy	0.091	0.755	-0.051
Advertising of alcohol should be banned	0.600	0.213	-0.100
Random breath testing	0.133	0.701	-0.009
Printed warnings about alcohol-related harm should be displayed	0.447	0.527	0.075
There should be limits on how late in the evening you can buy alcohol	0.709	0.159	-0.025
No legal authorities but parents should decide at what age their child is allowed to drink	0.185	0.036	0.687

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with the Kaiser Normalization.
Rotation converged in 4 iterations.

These distinct attitudes are not evenly distributed across participating countries, if a dominant attitude is sought for. On average, an attitude in favour of alcohol control policies, dominates with about one-third support from the respondents, followed by attitudes supportive of educational measures and a laissez faire approach, with about 25% of support each. Nevertheless this almost even distribution is not replicated in any single country.

An alcohol control-oriented attitude dominates in two countries, in Italy, and Estonia. In Norway, Sweden and UK attitudes supportive of alcohol control are almost as prevalent among the respondents as those in favour of education. In Croatia, Hungary, Spain-Catalonia and Romania attitudes in favour of alcohol control seem to compete with the laissez faire approach. As for the attitude, that could be described as the laissez faire approach, it prevails among the respondents of Portugal, Spain, Austria, Lithuania, Poland and Bulgaria, while attitudes supportive of education are dominant in Denmark, Finland, France, Greece and Iceland.

Figure A3.8.15. Dominant attitudes towards alcohol policy



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Discussion

There is consensus among respondents that the most preferable policy measures are education and information as well as random breath testing of drivers, both supported by the vast majority of respondents. This results confirm, in general, earlier European findings (Eurobarometer 2010). Over 60% agree too that adult people are responsible enough to protect themselves from harm caused by their own drinking. Against prevailing economic ideologies, however, a majority of respondents accepts that alcohol is not a product like any other and requires special restrictions and that public authorities have responsibility to protect people from being harmed by their own drinking. A lesser consensus emerges as regards various alcohol policy measures; opinions on different restrictions on alcohol availability and affordability are almost split among supporters and opponents with a small majority in favour of controlling late evening hours of alcohol sales and a tiny majority against high prices aiming at reducing alcohol-related harm.

Attitudes supporting three policy options – i.e. alcohol control, alcohol education and a laissez faire approach – that emerged from factor analysis are present in all countries with varying intensity. This attitudes mix is only partially related to the existing level of control. In countries with the highest level of alcohol control, such as Sweden, Norway, Finland and Iceland, attitudes supportive of this policy are expressed by 25–40% of respondents, which is around the European average. However, in all these countries attitudes supportive of alcohol education as a major alcohol policy approach fluctuate around 40%. On the other hand, in all of them too, the laissez faire approach is the least prevalent, with support ranging from 12 to 17% of respondents.

Among countries with a low level of control, such as Austria, Portugal, Italy, Bulgaria, Spain, Greece and Hungary, the laissez faire approach enjoys the highest level of support, with two notable exceptions. In Italy support for alcohol control measures clearly dominates, with over 50% support, while in Greece over 50% of respondents support education as a major policy option.

Among all remaining jurisdictions with a medium score of alcohol control support, two different policy options seem to compete in public opinion: e.g. in Denmark and Poland the laissez faire approach with education, in Lithuania and Spain-Catalonia, laissez faire with alcohol control, while in the UK, Romania and Estonia support for alcohol control is relatively high, competing either with education or the laissez faire approach.

Having these results in mind, it can be claimed that opinion and attitudes towards alcohol policy are not entirely consistent and may be regarded as ambivalent on an individual level and the more so on the aggregate level. Nevertheless, it can be argued, too, that the existing level of control may have affected attitudes; respondents from the countries with a high level of control seem to be more in favour of education and individual control even though support for alcohol control measures is also high, while respondents from the countries having low alcohol control scores are more likely to support the laissez faire approach.

Despite existing regularities and notable exceptions it can be argued that implementation of evidence-based alcohol policy has varying prospects in different countries. There are a number of countries, such as Italy or Estonia, where the introduction of further alcohol control measures would be met with public approval while in Nordic countries, where the level of control is already high, further actions might consider more educative measures. Finally, there is a bulk of countries where the introduction of stricter controls would be met with resistance and where alcohol education should aim at convincing their societies that evidence-based policies are pragmatic, cost-effective and would contribute to the health and welfare of their citizens.

References;

Anderson P. and Baumberg B. (2006) Alcohol in Europe. A public health perspective;a report for the European Commission. Institute of Alcohol Studies, UK.

Anderson, P., Braddick, F., Reynolds, J. & Gual, A. (Eds) Alcohol Policy in Europe: Evidence from AMPHORA. The AMPHORA project, available online: http://amphoraproject.net/view.php?id_cont=45.

Eurobarometer (2010) EU citizens' attitudes towards alcohol. European Commission.

Karlsson, T., Lindeman, E. & Österberg, E. (2012) Does alcohol policy make any difference? Scales and consumption. In: Anderson, P., Braddick, F., Reynolds, J. & Gual, A. (Eds) Alcohol Policy in Europe: Evidence from AMPHORA.

Moskalewicz J., Wieczorek Ł., Karlsson T., Österberg E. (2013): Social support for alcohol policy: literature review. Drug. Educ. Prev. Polic. 20 (5): 361–374.

A3.9 Socio-demographic characteristics

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As was expected, generally the male/female ratio is close to 1:1 in the general sample (see Table A3.9.1), with several exceptions – in Denmark there was a little higher representation of females (53.5%) than in other countries, while in Norway there was a little higher representation of males (51.3%) over females in the national sample.

Table A3.9.1. Gender groups (%)

	Males	Females
Austria	49.9	50.1
Bulgaria	49.3	50.7
Croatia	49.9	50.1
Denmark	46.5	53.5
Estonia	48.1	51.9
Finland	50.6	49.4
France	49.0	51.0
Greece	49.8	50.2
Hungary	49.8	50.2
Iceland	50.6	49.4
Italy	49.7	50.3
Lithuania	48.3	51.7
Norway	51.3	48.7
Poland	49.8	50.2
Portugal	48.6	51.4
Romania	50.0	50.0
Spain*	50.2	49.8
Spain-Catalonia	50.4	49.6
Sweden	49.1	50.9
UK	48.9	51.1
Average	**49.5**	**50.5**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Average age of participants in the total sample was around 41 years, with an average variability equal to 13 years. The highest variability in age was observed in the Finnish national sample – the standard deviation was the highest and was equal to 14 years. In several countries the female sub-sample was slightly older than the male sub-sample – that pattern emerged in Croatia, Estonia, Finland, France, Greece, Hungary, Lithuania, Poland, and Romania. Detailed statistics are presented in Table A3.9.2.

Table A3.9.2. Mean age and age groups by gender (%)

	Gender						Age groups					
	Male			Female			18 yrs – 34 yrs		35 yrs – 49 yrs		50+ yrs	
	Mean	Median	SD	Mean	Median	SD	Male	Female	Male	Female	Male	Female
Austria	41.01	42.00	13.41	41.54	42.00	13.50	35.7	34.2	33.0	32.8	31.3	33.1
Bulgaria	41.52	41.00	13.37	41.54	42.00	13.23	34.3	34.8	34.1	33.8	31.6	31.4
Croatia	40.93	42.00	13.63	42.11	43.00	13.44	36.5	32.7	31.6	32.0	32.0	35.2
Denmark	43.80	46.00	13.81	43.29	45.00	13.66	40.1	35.3	30.7	31.0	29.2	33.6
Estonia	40.21	39.00	12.93	41.60	41.00	13.24	35.5	34.5	31.1	30.6	33.4	34.8
Finland	41.88	42.00	14.28	42.35	42.00	14.12	33.8	28.5	33.6	33.2	32.6	38.2
France	41.66	42.00	13.42	41.96	43.00	12.90	28.6	27.3	29.5	35.1	41.9	37.6
Greece	41.45	42.00	13.30	42.01	43.00	12.94	32.0	29.1	39.4	40.3	28.7	30.6
Hungary	40.89	40.00	12.98	42.46	42.00	13.53	33.2	31.5	37.8	33.0	28.9	35.5
Iceland	40.01	39.23	13.38	40.45	40.00	13.28	40.0	38.9	31.7	29.2	28.3	31.9
Italy	42.50	43.00	13.04	42.55	44.00	12.84	30.3	29.0	36.2	37.3	33.5	33.7
Lithuania	40.43	41.00	13.35	41.86	43.00	13.46	37.3	33.2	31.9	31.8	30.8	34.9
Norway	40.57	41.00	13.40	40.67	41.00	13.31	36.7	36.7	32.2	32.7	31.1	30.5
Poland	40.79	40.00	13.21	41.85	42.00	13.46	38.4	35.5	31.0	31.5	30.6	33.0
Portugal	41.38	41.00	13.40	41.64	42.00	13.25	34.6	33.1	34.6	35.5	30.9	31.4
Romania	40.65	40.00	13.03	41.57	41.00	13.57	37.1	34.9	33.7	32.7	29.2	32.4
Spain*	40.81	41.00	12.62	40.98	42.00	12.33	30.3	30.2	41.1	42.7	28.5	27.1
Spain-Catalonia	41.74	42.00	12.72	41.66	42.00	12.05	32.8	32.6	39.3	40.5	27.9	27.0
Sweden	40.93	41.00	13.50	40.59	41.00	13.32	36.5	37.2	32.6	33.4	30.9	29.4
UK	42.17	41.53	13.86	42.49	42.00	13.85	34.6	34.5	29.7	30.8	35.6	34.7
Average	**41.27**	**41.00**	**13.33**	**41.75**	**42.00**	**13.26**	**34.9**	**33.2**	**33.7**	**34.0**	**31.3**	**32.8**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

As regards legal marital status, in the general sample the highest percentage of participants is married or in a legal partnership (58.2%), while small percentages are divorced and not re-married (8.2%), or widowed and not re-married (2.8%). In some national samples there is a specific pattern in legal marital status distribution – in Estonia and Finland the percentage of married or in legal partnership is similar to never married and never in a partnership, while in Iceland and Romania the percentage of participants who are married or in legal partnership is much higher than in other countries. Detailed information about the distribution of legal marital status is presented in Table A3.9.3.

Table A3.9.3. Legal marital status (%)

	Current legal marital status			
	Married or in a legal partnership	Never married and never in a legal partnership	Divorced and not re-married	Widowed and not re-married
Austria	47.7	40.5	10.3	1.4
Bulgaria	59.5	27.0	9.5	4.0
Croatia	61.9	28.4	5.8	3.9
Denmark	62.0	26.0	9.8	2.3
Estonia	44.4	43.3	8.7	3.6
Finland	43.1	45.2	9.1	2.5
France	52.6	37.1	9.1	1.2
Greece	60.3	33.9	3.5	2.2
Hungary	63.2	24.3	9.7	2.9
Iceland	72.9	19.4	6.4	1.3
Italy	58.6	32.5	6.4	2.5
Lithuania	57.6	27.3	10.4	4.6
Norway	52.7	39.1	6.9	1.3
Poland	60.8	23.2	10.8	5.1
Portugal	59.5	29.7	6.7	4.2
Romania	70.0	20.2	5.4	4.3
Spain	62.7	30.2	8.5	1.7
Spain-Catalonia	59.6	25.0	10.6	1.7
UK	56.4	35.1	7.3	1.2
Average	**58.2**	**31.0**	**8.2**	**2.8**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The question about having a permanent partner was asked only to those respondents who indicated in the previous question being never married and never in a legal partnership and it was included to the socio-demographic section only in eleven surveys. As can be seen in Table A3.9.4, the highest percentage of participants having a permanent partner was found in Estonia and Austria. In the general sample, the highest percentage of participants, almost 60%, did not have a permanent partner. Among the participants who reported having a permanent partner, a similar percentage live with a partner as do not live with a partner.

Table A3.9.4. Having permanent partner (%)

	Yes. I live with partner	Yes. I do not live with partner	No
Austria	27.3	27.8	44.9
Bulgaria	17.5	19.9	62.7
Croatia	9.2	25.7	65.1
Denmark		-	
Estonia	49.7	12.8	37.5
Finland	28.9	19.5	51.6
France		-	
Greece		-	
Hungary	15.3	24.2	60.5
Iceland		-	
Italy		-	
Lithuania	13.3	25.7	61.0
Norway	31.8	16.6	51.6
Poland	4.1	26.3	69.6
Portugal		-	
Romania		-	
Spain*	10.5	20.5	69.0
Spain-Catalonia	7.5	27.9	64.5
UK		-	
Average	**19.5**	**22.5**	**58.0**

- data not available

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

In the demographic section of the RARHA questionnaire, participants were also asked to indicate the number of persons living in the household. The percentage of respondents in the total sample who reported living alone is on average 14, and inspection of the national samples shows that the highest rate of people living alone was found in Finland (30%), followed by Poland, Lithuania, and Austria (around 20%), and with the smallest rate in Croatia, Greece and Romania (less than 10%) (see Table A3.9.5). The average number of persons living in one household is around 3, with the highest number in Croatia and Romania, and the smallest number in Finland.

Table A3.9.5. Number of persons living alone in the household

	Percentage of respondents living alone	Number of persons living in the household		
		Mean	Median	Std. Deviation
Austria	19.5	2.67	2	1.356
Bulgaria	8.8	3.00	3	1.156
Croatia	6.9	3.50	3	1.481
Denmark	16.5	2.69	2	1.274
Estonia	15.1	2.83	3	1.334
Finland	30.7	2.33	2	1.352
France	16.1	2.92	3	1.438
Greece	7.0	3.37	3	1.302
Hungary	10.1	3.08	3	1.397
Iceland	11.7	3.21	3	1.389
Italy	15.6	2.99	3	1.310
Lithuania	20.9	2.59	2	1.223
Norway	17.0	2.80	3	1.393
Poland	20.5	2.74	3	1.378
Portugal	12.8	2.86	3	1.233
Romania	9.3	3.22	3	1.468
Spain	10.3	2.92	3	1.173
Spain-Catalonia	10.0	2.82	3	1.076
Sweden	-	-	-	-
UK	14.0	2.87	3	1.367
Average	**14.4**	**2.90**	**3**	**1.300**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Place of residence was categorized by size into five categories: a village, a small city, a medium sized city, a large and a very large city. Generally, in the total sample most of the respondents lived in cities of different sizes and only 26% of respondents lived in a village. In national samples the distributions are more specific – in Italy the majority of the sample live in a small city or town. The highest number of people living in a village was in samples collected in Austria, Croatia, Norway, Poland, and Romania. The highest proportions of people living in a large city were in Greece, Austria, Romania, and Spain-Catalonia[1] (above 20%).

Table A3.9.6. Place of residence (%)

	Place of residence				
	a village	A small city or town (below 50.000 res.)	a medium size city (50.000–250.000 res.)	a large city (more than 250.000 to 1 million res.)	a very large city (over 1 million res.)
Austria	40.2	20.8	10.6	8.7	19.7
Bulgaria	27.3	27.4	19.8	9.2	16.3
Croatia	37.9	25.1	17.0	15.0	5.1
Denmark	19.2	41.1	18.4	10.2	11.1
Estonia	20.7	34.2	13.0	32.1	0.0
Finland	26.2	19.9	29.8	24.2	0.0
France	23.0	22.6	10.7	26.1	17.6
Greece	21.3	26.9	12.4	10.4	28.9
Hungary	29.1	33.3	20.1	0.0	17.5
Iceland	14.4	49.6	36.0	0.0	0.0
Italy	10.0	56.6	18.6	8.2	6.7
Lithuania	31.7	25.0	14.7	28.6	0.0
Norway	39.7	19.8	17.3	22.3	0.9
Poland	39.2	24.1	16.7	15.4	4.5
Portugal	26.1	41.8	21.0	11.2	0.0
Romania	41.2	14.6	13.5	8.4	22.3
Spain*	12.7	33.3	29.1	15.0	9.8
Spain-Catalonia	13.5	27.8	25.1	12.3	21.3
UK	29.7	44.8	8.0	10.9	6.6
Average	**25.9**	**31.5**	**18.5**	**14.1**	**9.9**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

Although educational status was measured in a more detailed way, in Table A3.9.7 three categories are presented: primary and lower secondary education (categories 'Less than primary education', 'Primary education', and 'Lower secondary education' combined together), secondary education (categories 'Upper secondary education – general', 'Upper secondary education – vocational', 'Post-secondary non-tertiary education', 'Short-cycle tertiary education' combined together), and Higher education ('Bachelor's level', 'Master's level' and 'Doctoral level' combined together). In the total sample the highest percentage of respondents received secondary education as the highest educational level, but in some national samples primary and lower secondary education is represented most often – as Table A3.9.7 shows the highest percentage of primary and lower secondary education is in Croatia, Hungary, Poland, and Portugal (around 40%). The highest percentage of respondents who have higher education is in national samples from Denmark, Finland, France, Iceland, Norway, Sweden and the United Kingdom (more than 40%).

Table A3.9.7. Education status (%)

	Education status: highest school grade			
	Primary and lower secondary education	Secondary education	Higher education	Other
Austria	13.5	64.5	20.0	2.0
Bulgaria	11.9	54.1	34.0	0.0
Croatia	41.4	39.1	19.4	0.1
Denmark	13.8	40.0	46.2	0.1
Estonia	6.8	56.8	36.4	0.0
Finland	11.4	43.7	44.9	0.0
France	10.5	41.8	47.4	0.2
Greece	14.1	49.6	36.3	0.0
Hungary	48.5	36.9	14.6	0.0
Iceland	15.8	34.2	48.6	1.4
Italy	26.5	49.4	24.1	0.0
Lithuania	7.3	67.9	24.9	0.0
Norway	5.9	38.1	54.3	1.7
Poland	40.4	40.3	19.2	0.1
Portugal	51.7	29.3	18.9	0.1
Romania	16.0	55.4	28.5	0.1
Spain*	21.0	56.7	22.3	0.0

Spain-Catalonia	15.1	64.8	20.1	0.0
Sweden	8.3	40.4	49.9	1.3
UK	9.2	45.5	45.2	0.1
Average	**19.5**	**47.4**	**32.8**	**0.4**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Six categories of occupational status included those who were currently

- professionally active,
- students,
- unemployed,
- retired or unable to work due to illness,
- home carers,
- others.

As the survey was carried out in the working age population, employed people constitute the majority of the sample. The lowest proportion of those active is in Greece and Croatia, just above 50%. Consequently, both countries have the highest proportion unemployed, 17.8% and 16.1%, respectively. Two-digit unemployment is also present in Spain, Portugal and Italy.

Table A3.9.8. Occupational status (%)

	Occupational status					
	Active	Non-active				
		Student	Unemployed or temporarily not working	Retired or unable to work through illness	Home carer	Other
Austria	73.3	8.3	5.2	10.9	1.8	0.4
Bulgaria	76.3	6.5	6.5	8.2	1.8	0.7
Croatia	56.7	6.2	16.1	14.2	6.2	0.5
Denmark	77.8	6.5	4.1	9.6	0.8	1.3
Estonia	77.8	2.7	5.0	6.8	3.9	3.8
Finland	67.0	8.5	9.5	13.4	0.5	1.1
France	68.1	8.3	10.0	9.6	3.9	0.1
Greece	50.1	9.4	17.8	13.3	8.3	1.1
Hungary	73.6	5.2	5.2	14.0	0.4	1.5
Iceland	83.7	8.5	1.9	3.8	0.2	1.8
Italy	64.3	7.4	10.4	7.6	10.1	0.3

	Occupational status					
	Active	Non-active				
		Student	Unemployed or temporarily not working	Retired or unable to work through illness	Home carer	Other
Lithuania	71.2	9.0	8.7	6.9	1.7	2.5
Norway	81.2	6.4	2.6	6.9	1.6	1.3
Poland	73.0	3.0	6.5	11.8	5.1	0.6
Portugal	62.9	7.8	11.0	12.3	5.5	0.5
Romania	64.7	3.9	4.0	13.2	12.1	2.1
Spain*	65.9	7.1	12.4	5.6	7.8	1.2
Spain-Catalonia	69.1	5.3	14.2	7.7	2.9	0.8
Sweden	79.1	8.7	4.3	4.9	0.6	2.5
UK	70.2	4.1	7.2	14.9	2.5	1.1
Average	**70.3**	**6.6**	**8.1**	**9.8**	**3.9**	**1.3**

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Social class of respondents was based on their current occupation. The questionnaire offered 7 different employment categories which were then reduced to five:

- Blue collar worker (unskilled manual worker and skilled manual worker),
- White collar worker,
- Manager, professional,
- Business person,
- Other.

In the case of respondents who were professionally in-active their social class was based on their most recent employment, and for those who had never held any paid job, their social class was based on employment of the head of their household.

Table A3.9.9. Social class (%)

	Social class				
	Blue collar worker	White collar worker	Manager, professional	Business person	Other
Austria	26.9	8.2	49.0	6.6	9.3
Bulgaria	53.9	17.2	19.5	5.1	4.4
Croatia	61.3	13.3	13.9	4.7	6.8

	Social class				
	Blue collar worker	White collar worker	Manager, professional	Business person	Other
Denmark	42.4	26.2	18.6	6.8	6.0
Estonia	45.4	8.0	36.4	10.1	0.0
Finland	51.1	17.9	23.8	7.1	0.0
France	23.8	51.8	21.1	3.3	0.0
Greece	25.9	43.7	18.9	11.0	0.5
Hungary	59.8	16.7	17.1	4.5	2.0
Iceland	44.3	18.1	31.2	6.5	0.0
Italy	35.6	26.8	25.3	12.4	0.0
Lithuania	54.6	10.2	30.9	4.2	0.0
Norway	23.7	16.8	33.0	5.5	20.9
Poland	59.4	23.3	11.4	4.0	1.9
Portugal	62.0	15.6	16.5	5.9	0.0
Romania	67.9	10.5	18.9	2.7	0.0
Spain*	64.5	10.0	17.5	7.9	0.0
Spain-Catalonia	66.5	9.4	14.4	9.7	0.0
Sweden	37.2	32.4	28.9	1.5	0.0
UK	32.5	22.2	37.3	6.9	1.1
Average	**46.9**	**19.9**	**24.3**	**6.3**	**2.6**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

On average blue collar workers dominated in the participating countries but there was huge variation across the surveys, as the proportion of this category ranged from about one fourth in Austria, France, Greece, Norway, to over sixty per cent in Croatia, Portugal, Romania and Spain and over 50% in several more countries, including Bulgaria, Finland, Hungary, Lithuania and Poland. White collar workers constituted about 20% on average, with much smaller variation within the range, roughly between 10 to 25%. Only three countries had a proportion of while collar workers between 30–50%: France (51.8), Greece (44%) and Sweden (37%). The variation in proportions of white collar workers can be attributed to culturally specific distinctions between white collars and managers/professionals and, perhaps, different systems of upward promotion within bureaucratic staff. In a few countries, where the proportion of white collars was relatively low, the respective proportion of managerial/professional staff was indeed high, e.g. in Austria, 8.2% and 49.0%, respectively, or in Estonia, 8.0% and 36.4% ,respectively. Business persons were in the minority, representing less than 10% in all participating countries, except for Estonia, Greece and Italy.

However, with these few exceptions, the class structure measure adopted for this study seem to reflect existing divisions. In almost all countries where blue collar workers constituted a majority, proportions of white collar workers and managers/professionals were similar, ranging between 10 and 20%. Relatively low percentages of those whose social class was categorized as "others" also suggests the adequacy of the classification adopted for comparative purposes. Only in Norway did the percentage of "others" surpass 20%, and this needs to be reconsidered.

The SEAS survey investigated religion of respondents and their religious involvement. The survey includes representatives of all major Christian churches including Roman Catholics (over one third), Orthodox (about one fifth), Protestants and other Christian churches (about one sixth). Other religious denominations were represented by less than 10 per cent of respondents in individual countries, except for Norway with 11% confirming other denominations. Non-believers constituted substantial proportions, ranging from over 60% in Estonia, around 50% in the UK, over one third in Iceland, Norway and Spain-Catalonia, and about one fourth in Austria, Denmark, Hungary and Spain. The lowest proportions of those reporting no religious affiliation are in Romania, Poland, Croatia, and Bulgaria.

Frequencies of responses to the question on religious involvement are presented in Table A3.9.11. This question was applied in eight surveys only. The highest proportion of those who reported attending religious services regularly is in Poland – close to 50%, in Croatia and Lithuania – about one third. In Spain and France this percentage is 14% and 10% respectively.

Table A3.9.10. Religious affiliation (%)

	Religious affiliation					
	Roman Catholic	Protestant	Orthodox	Other Christian Churches	Other denominations	None
Austria	65.7	5.4	0.9	1.2	2.5	24.2
Bulgaria	1.4	0.5	84.3	0.3	8.4	5.1
Croatia	88.2	0.1	3.7	0.1	3.5	4.4
Denmark	1.7	68.3	0.8	1.8	5.2	22.2
Estonia	0.7	8.7	22.3	3.4	1.7	63.1
Finland	-					
France	-					
Greece	0.4	0.1	93.6	0.2	4.7	1.1
Hungary	54.6	17.0	0.3	1.8	0.6	25.7
Iceland	5.0	42.3	0.7	11.0	4.3	36.8
Italy	-					
Lithuania	81.3	1.1	4.2	1.1	0.6	11.7
Norway	2.1	42.7	0.3	7.0	11.3	36.5
Poland	96.1	0.3	0.5	0.2	0.3	2.5

	Religious affiliation					
	Roman Catholic	Protestant	Orthodox	Other Christian Churches	Other de-nominations	None
Portugal	-					
Romania	3.0	0.8	90.1	4.6	0.7	0.9
Spain*	75.6	0.6	0.0	0.1	2.3	21.4
Spain-Catalonia	61.9	0.3	0.3	1.2	2.2	34.1
Sweden	-					
UK	11.5	20.8	1.6	9.4	7.5	49.2
Average	**36.6**	**13.9**	**20.2**	**2.9**	**3.7**	**22.6**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Table A3.9.11. Religious involvement (%)

	Religious involvement		
	Believing and practising	Believing and not-practising	Not believing
Austria	-		
Bulgaria	-		
Croatia	33.5	60.1	6.4
Denmark	-		
Estonia	-		
Finland	-		
France	10.2	45.0	44.8
Greece	-		
Hungary	-		
Iceland	-		
Italy	27.3	57.5	15.2
Lithuania	33.4	53.1	13.6
Norway	-		
Poland	46.1	49.5	4.4

	Religious involvement		
	Believing and practising	Believing and not-practising	Not believing
Portugal		-	
Romania		-	
Spain*	14.2	59.6	26.2
Spain-Catalonia	14.2	49.8	36.0
Sweden		-	
UK		-	
Average	**25.5**	**53.5**	**20.9**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Of ten surveys which considered a question on ethnic minorities to be important from the perspective of the alcohol survey, and not too sensitive, four have a substantial proportion of minorities, including Estonia – over 30%, Bulgaria, Lithuania and Sweden (14–15%). In the remaining countries this percentage ranges between 2 and 4, with the exception of Poland where representatives of minorities constituted 0.2% of the sample.

Table A3.9.12. Ethnic minorities (%)

	Minorities
Austria	3.8
Bulgaria	14.0
Croatia	-
Denmark	-
Estonia	31.1
Finland	-
France	-
Greece	2.2
Hungary	-
Iceland	-
Italy	-
Lithuania	15.5
Norway	-

	Minorities
Poland	0.2
Portugal	4.2
Romania	-
Spain*	3.3
Spain-Catalonia	3.5
Sweden	14.2
UK	-

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Last but not least, income was analysed to provide an opportunity to investigate its impact on alcohol consumption as well as the impact of income disparities on alcohol consumption and related problems. A 'per household member' income was calculated by dividing reported family income by the number of household members. Several countries had to be excluded due to comparability problems. In many others, a high proportion of missing values was recorded. Table A3.9.13 shows the quartile distribution of incomes in individual surveys, in other words it presents what proportion of the overall income is possessed by each quartile of the sample. The income distribution seems to be most unevenly distributed in Romania, where close to 70% of overall income is consumed by the most well-off quarter of the sample, while 4% only falls into the hands of the 25% from the bottom of the income ladder. However, income distribution in the remaining countries is also uneven, with 44 to 55% of overall income possessed by 25% of the richest quartile and ten per cent or less by 25% of the poorest quartile. Lithuania seems to represent a relatively more even distribution with 14% for the bottom quartile and 43.5% for the top quartile.

Table A3.9.13. Quartile distribution of incomes per household member (%)

	N					
	Valid	Missing	Bottom quartile	Second quartile	Third quartile	Top quartile
Austria	1660	1433	10.5	18.5	25.8	45.1
Bulgaria	1939	1061	8.2	18.0	24.3	49.5
Croatia	928	572	10.2	19.5	21.6	48.6
Denmark	1477	98	9.2	17.1	26.9	46.8
Estonia	1224	929	9.5	14.8	26.8	48.9
Finland	1431	69	9.4	17.3	20.8	52.4
France	1604	97	8.5	16.2	27.5	47.7
Greece	1143	376	9.1	14.9	24.2	51.7

	N					
	Valid	Missing	Bottom quartile	Second quartile	Third quartile	Top quartile
Hungary	1535	470	10.0	18.6	24.7	46.7
Iceland	683	190	9.7	16.1	26.1	48.1
Italy	-					
Lithuania	1320	193	14.0	16.6	25.8	43.5
Norway	-					
Poland	1132	423	10.6	18.4	26.2	44.7
Portugal	864	636	9.9	14.9	24.9	51.3
Romania	1354	146	4.2	9.2	17.8	69.7
Spain*	1007	639	8.5	14.0	22.7	54.8
Spain-Catalonia	380	281	9.7	19.5	21.4	49.4
Sweden	-					
UK	603	446	8.0	17.3	21.7	53.1

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

A3.10 Wellbeing

Anastasios Fotiou, Eleftheria Kanavou, Paul Lemmens

In addition to 'objective', socio-demographic data the RARHA SEAS instrument measured general wellbeing. Three separate items measured subjective health, quality of social relationships, and psychological health, respectively – all measures using a 5-point scale ranging from very good and good to fair, bad and very bad. Spearman correlations between the three measures were all moderately high, between .34 and .53, even after controlling for country (correlations between .32 and .48).

Subjective health

On average, 77.0% of the respondents (data from 20 surveys) perceived their health as good or very good (range across countries: Lithuania – 51.6% , Spain[1] – 87.7%) (Table A3.10.1). As little as 4.5% reported bad or very bad health (range: Bulgaria – 1.0% , Lithuania – 9.9%; data not shown). Good or very good health was reported by 78.0% males and 75.9% – females. Across individual countries, significant gender differences (p<0.01) were observed only in Romania, where – compared to males – a lower percentage of females reported good or very good and a higher percentage fair health, and in Iceland, where a higher percentage of females reported bad or very bad health (data not shown). As expected, in all countries but in Iceland a significantly higher percentage of young adults (18–34 years) (87.2% on average) reported good or very good health compared to middle-aged (35–49 years) (79.0% on average), and the middle-aged reported a higher percentage of good or very good health compared to older adults (50 and more) (63.8% on average) (Table A3.10.1).

Table A3.10.1. Percentage of participants in the SEAS study reporting good or very good health, in the total sample and by gender and age group

	Good or very good health					
	Total sample	Gender		Age group		
		Males	Females	18–34	35–49	50+
Austria	67.8	67.6	67.9	75.2	66.7	60.7
Bulgaria	84.8	86.0	83.7	87.7	87.8	78.5
Croatia	74.5	77.3	71.7	93.7	79.6	49.9
Denmark	78.7	78.1	79.2	86.3	80.6	71.7
Estonia	67.9	67.2	68.5	82.7	74.7	43.4
Finland	74.6	71.3	78.0	88.5	76.5	58.7
France	85.4	87.7	83.4	92.8	86.6	77.8
Greece	82.9	85.2	80.6	86.2	83.8	78.2
Hungary	70.3	72.4	68.3	88.8	77.0	44.6

[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

	Good or very good health					
	Total sample	Gender		Age group		
		Males	Females	18–34	35–49	50+
Iceland	76.6	77.9	75.2	77.5	80.3	71.5
Italy	80.9	83.3	78.5	89.7	84.7	68.8
Lithuania	51.6	52.0	51.3	69.7	49.1	34.6
Norway	87.6	88.7	86.3	93.1	84.8	83.9
Poland	80.1	81.5	78.7	93.2	83.1	62.0
Portugal	68.1	70.0	66.4	85.1	73.7	43.4
Romania	70.3	76.3	64.3	87.7	70.7	49.7
Spain*	87.7	87.9	87.4	93.7	88.9	78.6
Spain-Catalonia	86.1	87.7	84.5	95.0	91.0	69.0
Sweden	85.4	86.6	84.3	89.4	85.5	80.5
UK	77.8	76.2	79.4	87.3	75.9	70.2
AVERAGE	**77.0**	**78.0**	**75.9**	**87.2**	**79.0**	**63.8**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Social relationships

On average, 89.7% of the respondents (data from 19 surveys) perceived their social relationships with family, friends, colleagues etc., as good or very good (range across countries: Lithuania – 71.7%, Norway – 96.7%) while 1.1% reported bad or very bad social relationships (range: Portugal – 0.2%, Austria – 3.9%) data not shown). On average, good or very good social relationships were reported at 88.9% among males and 90.4% among females. Across individual countries, gender differences were observed in Estonia, Denmark, Romania, and the UK- in all cases females reported higher percentages of good or very good social relationships, compared to males. In the UK also a higher percentage of males compared to females reported bad or very bad social relationships (data not shown). Age differences across the individual countries were observed only in Croatia and Hungary where good or very good social relationships were reported in higher percentages among young adults, compared to the other two age groups (Table A3.10.2).

Table A3.10.2. Percentage of participants in the SEAS study reporting good or very good quality of social relationships, in the total sample and by gender and age group

	Good or very good social relationships					
	Total sample	Gender		Age group		
		Males	Females	18–34	35–49	50+
Austria	81.4	81.2	81.6	81.1	81.2	82.1
Bulgaria	94.0	94.0	94.0	94.5	94.6	92.8
Croatia	88.7	88.2	89.1	94.3	88.6	83.0
Denmark	92.8	90.1	95.1	92.5	93.7	92.3
Estonia	89.3	86.3	92.1	90.2	89.6	88.0
Finland	91.9	90.9	92.8	93.1	92.2	90.2
France	94.0	93.6	94.3	95.3	93.3	93.5
Greece	92.1	92.3	91.9	92.9	91.4	92.2
Hungary	83.6	81.9	85.3	89.0	87.5	74.0
Iceland	83.1	83.7	82.6	85.9	81.7	81.0
Italy	88.5	89.4	87.5	91.3	88.5	86.0
Lithuania	71.7	70.8	72.6	75.0	70.4	69.5
Norway	96.7	95.7	97.9	97.0	96.5	96.7
Poland	89.9	89.5	90.3	91.5	89.5	88.5
Portugal	90.7	90.6	90.8	92.2	92.4	87.1
Romania	94.2	92.5	95.9	93.3	96.2	93.0
Spain*	94.4	94.4	94.4	95.0	94.3	93.9
Spain-Catalonia	93.8	94.3	93.3	93.5	94.6	92.9
Sweden	-	-	-	-	-	-
UK	92.6	89.6	95.4	93.3	91.8	92.6
AVERAGE	**89.7**	**88.9**	**90.4**	**91.1**	**89.9**	**87.9**

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

Psychological health

On average, 81.0% of the respondents (data from 11 surveys) perceived their psychological health as good or very good (range across countries: Lithuania – 68.8%, Bulgaria – 95.3%). Only 3.1% reported bad or very bad psychological health (range: Bulgaria – 0% , Greece – 7.4%; data not shown). On average, good or very good psychological health was reported at 82.0% by males and 80.1% by females. In the individual countries, gender differences were observed only in Poland where a higher percentage of males reported good or very good psychological health, compared to females. Differences were observed across age groups in most surveys, with a higher percentage of young adults reporting good or very good psychological health, compared to either of the other age groups (Table A3.10.3).

Table A3.10.3. Percentage of participants in the SEAS study reporting good or very good psychological health, in the total sample and by gender and age group

	Good or very good psychological health					
	Total sample	Gender		Age group		
		Males	Females	18–34	35–49	50+
Austria	76.6	77.9	75.2	78.3	75.2	76.2
Bulgaria	95.3	95.3	95.4	96.3	96.3	93.2
Croatia	87.4	88.2	86.7	95.8	89.8	76.5
Denmark	-†	-	-	-	-	-
Estonia	75.1	73.6	76.5	86.2	76.1	60.8
Finland	-	-	-	-	-	-
France	-	-	-	-	-	-
Greece	72.9	76.0	69.8	78.9	73.1	66.4
Hungary	71.8	73.1	70.4	85.7	76.5	52.5
Iceland	-	-	-	-	-	-
Italy	-	-	-	-	-	-
Lithuania	68.8	66.0	71.4	73.6	66.5	65.8
Norway	-	-	-	-	-	-
Poland	83.3	86.4	80.3	89.5	84	75.6
Portugal	-	-	-	-	-	-
Romania	87.0	88.2	85.8	94.4	86.8	78.5
Spain*	89.1	90.7	87.6	93.0	88.1	86.1
Spain-Catalonia	84.0	86.5	81.4	88.0	86.6	75.5
Sweden	-	-	-	-	-	-
UK	-	-	-	-	-	-
AVERAGE	**81.0**	**82.0**	**80.1**	**87.2**	**81.7**	**73.4**

Notes. † Item not included in the national survey.

* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

A3 SUMMARY

Several decades that followed World War Two witnessed progressing cultural homogenisation across Europe. Despite the existence of the two competitive political blocks divided by the Iron Curtain that hindered direct contacts unique European culture tended to emerge, including beau arts as much as life styles. These developments were accelerated after rapid transitions towards a market economy and multi-party system in the Eastern part of Europe, in the 1990s. Increasing cultural homogenisation has also been reflected in changes in drinking. In the 1950s wine-drinking countries that belonged to the biggest consumers, such as France or Italy, consumed over 15 litres of pure alcohol per capita while consumption in spirits-drinking countries from the bottom of European ranking, such as Finland, Holland or Poland was six times lower and varied between two and three litres per capita. Consumption levels in beer-drinking countries, such as Czechoslovakia, Germany or the UK were clearly higher compared to spirits-drinking countries but much lower than in the countries where wine was a beverage of choice. Moreover, in the majority of European countries one could easily distinguish a beverage of choice, whose share in overall consumption surpassed two thirds. Since then, the gap in consumption level tends to have narrowed. Consumption declined in the countries formerly having very high consumption levels while it has increased in those that earlier drank at relatively low levels. In all countries, new drinking patterns were either added to traditional ones leading to increased consumption e.g. in Finland where beer and wine became beverages of choice drunk in addition to traditional spirits, or replaced traditional patterns as in France, where consumption of spirits and beer increased at the expense of wine so that overall consumption levels were diminished. In effect, as shown by sales statistics, huge differences in consumption levels and beverage preferences slowly disappeared; a gap between the top consumer countries and countries from the bottom of this European ranking is not higher than two-fold. With few exceptions, beer is currently a beverage of choice in the majority of European countries and consumption structure according to beverage type has become more diversified within individual countries.

This apparently consistent picture of progressing cultural unification that emerges from the routine statistical data is not always reinforced by the RARHA SEAS study. According to its results, European drinking is still highly diversified in terms of proportion of abstainers, frequency of drinking and volumes consumed, risky single occasion drinking, motives of drinking and abstaining, context, in which alcohol is consumed, individual harm as well as harm suffered from others' drinking. Significant differences exist in attitudes towards alcohol policy and utilisation of unrecorded sources of alcohol. All these dimensions are extremely interesting research-wise and crucial for policy making and its monitoring.

On average, about 15% of Europeans participating in RARHA SEAS report to having abstained from alcohol in the past 12 months. This proportion, however, greatly varies from 7% in Denmark to over 25% in Portugal and over 30% in Italy. Information on proportion of abstainers throws additional light on a meaning of recorded consumption. As sales statistics show, per adult consumption in Denmark is relatively high surpassing 9.5 litres, and in Italy, with 7.6 litres, belongs to the lowest in Europe. However, per drinker consumption in Italy – 10.8 litres is higher than in Denmark – 10.4 litres. Taking into account proportion of abstainers among women, which is on average twice as high as among men, it can be calculated that a gender gap in consumption between drinking men and women is smaller than estimated for the whole population, in particular in the countries with relatively high prevalence of abstinence among women and low – among men.

There is a number of reasons why people of a legal drinking age abstain from alcohol. Four factors emerged in the RARHA SEAS sample: bad personal health, bad experiences with drinking, disliking taste and effects of alcohol and finally, rejecting alcohol due to religious or other principles that are reinforced by economic considerations. Most frequent reasons included "drinking is bad for your health" declared by 85% of those who abstained during the past 12 months, followed by "I have no interest in drinking" (80%), "I have seen bad examples of what alcohol could do" (71%) and "drinking is a waste of money" (70%). Those who abstain due to principles such as "I was brought up not to drink" constitute almost half of abstainers.

Factor analysis for motives of drinking identified also four factors: pleasure, fitting with others, healthiness and coping with problems. On average, hedonistic and social reasons dominated over all remaining ones.

The chapter on consumption produced a variety of fascinating results. First, that the traditional typology of drinking patterns based on beverage preferences has become less adequate. As mentioned above, in the majority of countries beer is a beverage of choice, except for Italy, Greece and France where wine still dominates and Lithuania and Bulgaria where spirits' share in consumption surpasses 40%. In all of them, however, beer is the second beverage of choice with its share in overall consumption well above one third. It is too early, however, to claim that traditions in drinking cultures are fading away. In fact, they still persist in terms of drinking frequency and alcohol volume consumed per drinking day. All countries traditionally termed as spirits-countries drink currently much more beer and wine and in some of them beer has become a beverage of choice while in others wine attracts the vast majority of consumers. Nevertheless, in all of them frequency of drinking is on average lower and volumes consumed per drinking day – higher, as compared with the remaining countries, no matter what they drink. On the opposite pole, there are countries belonging to Mediterranean cultures where wine is loosing its dominant position in favour of beer and spirits. Despite their change in drinking preferences they drink more frequently and lower volumes per drinking day compared to the former spirits-countries. Finally, there is a group of countries located between these two poles, composed of Austria, Hungary, Croatia and Romania – all geographically near to each other and close in terms of centuries-long common history.

Huge variation exists as regards prevalence of risky single occasion drinking (RSOD). A proportion reporting RSOD at least once in the past 12 months ranges from over 60% in the countries located in the North of Europe to less than 10% in Italy and Portugal. In all countries but two, prevalence of RSOD declines with age but often this decline does not seem to be as sharp as it might have been expected. A large gap appears when comparing proportion of RSOD days in total number of drinking days. This is higher than 25% in several northern European countries, including Lithuania and five per cent or less in Portugal and Italy. RARHA SEAS study brought together the data allowing the estimation of the share of alcohol attributed to RSOD in overall alcohol consumption, which is about 30% on average but with a huge range from close to 50% in Finland and Iceland to less than 10% in Italy.

Context of drinking may confound the immediate consequences of drinking. RARHA SEAS identified just a few general trends in this regard. On-premise drinking is more prevalent in better-off old EU member states compared to new members situated in the eastern part of the continent. Nevertheless, frequent, at least weekly, drinkers tend to drink at home, half of them drink with meals and with family members. In contrast, heavy episodic drinkers tend to drink more often with friends, colleagues or acquaintances.

Seven countries decided to explore a question of unrecorded supply of alcohol: Finland, Poland, Hungary, Portugal, Spain, including Catalonia and Greece as well as Croatia. In half of them the proportion of respondents who confirmed acquiring alcohol was substantial; from 28% in Croatia to about 40% in Greece and Finland. For Finns, unrecorded alcohol was mainly acquired from abroad while in Croatia and Greece – from domestic sources. In the remaining countries these proportions were lower but not insignificant – approx. 10% in Hungary, Portugal and Poland and several per cent in Spain. In spite of some methodological reservations, it can be estimated that the share of unrecorded alcohol consumption in overall consumption may vary from several per cent in Spain, Poland and Hungary, through a dozen or so per cent in Croatia and Finland, to a quarter in Portugal and about half in Greece.

Two instruments were applied to study individual harm for a drinker: Rapid Alcohol Problem Screen (RAPS) composed of four questions and relevant section of Composite International Diagnostic Interview (CIDI) that includes a dozen or so symptoms of alcohol use disorders applied in both DSM and ICD classification systems.

The RAPS applied in all participation countries showed that almost one in five respondents experienced at least one alcohol-related problem according to RAPS scale while one in ten experienced two or more problems in the past 12 months ranging from the most frequent "feeling guilt", to the least frequent "morning drink".

CIDI questions were employed in seven surveys, including Bulgaria, Lithuania, Poland, Portugal, Spain, Spain-Catalonia[1] and the UK. The percentage of respondents with alcohol-use disorders var-

[1] Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

ied from less than 4% in Portugal, 8–9% across Spain, about 11% in Poland and UK to over 17% in Bulgaria and Lithuania. A clear geographical gradient emerged with northern and eastern countries having a higher prevalence of alcohol problems compared to southern countries.

The issue of harm from others' drinking has so far been under-researched. It is confirmed in the Part B of this report devoted to secondary analyses of more than twenty European alcohol surveys carried out between 2008 and 2013, which did not find a single question on harm from others that could be compared across the countries. Therefore, a substantial part of the RARHA SEAS study was devoted to harm suffered due to others' drinking, including negative consequences of alcohol consumption by strangers and people personally known to respondents as well as harm from family members experienced in childhood and adolescence.

It was found that, on average, over 60% of Europeans from the participating countries reported being harmed due to others' drinking in the past 12 months, including 46% of those affected by a person known to them and 42% of those affected by a stranger's drinking. A weak geographical pattern was detected with people from eastern European countries suffering most harm followed by UK and Nordic countries. However, a relatively high prevalence of harm from others was reported in some southern European countries such as France and Spain and the prevalence appeared well below the European average in Sweden and in some eastern European countries such as Poland, Hungary and Croatia. Harm from others is almost evenly distributed across genders in terms of quantity but women tend to experience less serious harm more often such as being woken at night, feeling unsafe in public places or being verbally abused, while men suffer more often from more serious harm i.e. being harmed physically, being affected by drunken driving or having a serious argument.

The RARHA SEAS showed that every fifth European on average lived during childhood or adolescence in a household with a fairly heavy drinker and about half of them felt negatively affected 'a lot'. The highest prevalence of such experiences was reported in Baltic countries (well above 30%) and the lowest – in Italy and Spain. However, the geographical pattern is not clear either as France is close to the top of this ranking while Poland and Norway belong to the countries with a low prevalence of being affected in childhood by a heavy drinker.

There is consensus among respondents that the most preferable policy measures are education and information as well as random breath testing of drivers, both supported by the vast majority of respondents. Over 60% agree too that adult people are responsible enough to protect themselves from harm caused by their own drinking. Against prevailing economic ideologies, however, a majority of respondents accepts that alcohol is not a product like any other and requires special restrictions and that public authorities have responsibility to protect people from being harmed by their own drinking. A lesser consensus emerges as regards various alcohol policy measures; opinions on different restrictions on alcohol availability and affordability are almost split among supporters and opponents with a small majority in favour of controlling late evening hours of alcohol sales and a tiny majority against high prices aiming at reducing alcohol-related harm.

Attitudes supporting three major policy options – i.e. alcohol control, alcohol education and a laissez faire approach – that emerged from factor analysis are present in all countries with varying intensity. This attitudes mix is only partially related to the existing level of control. In countries with the highest level of alcohol control, such as Sweden, Norway, Finland and Iceland, attitudes supportive of this policy are expressed by 25–40% of respondents, which is around the European average. On the other hand, in all of them too, the laissez faire approach is the least prevalent, with support ranging from 12 to 17% of respondents.

Among countries with a low level of control, such as Austria, Portugal, Italy, Bulgaria, Spain, Greece and Hungary, the laissez faire approach enjoys the highest level of support, with two notable exceptions. In Italy support for alcohol control measures clearly dominates, with over 50% support, while in Greece over 50% of respondents support education as a major policy option.

Among all remaining counties with a medium score of alcohol control support, two different policy options seem to compete in public opinion: e.g. in Denmark and Poland the laissez faire approach with education, in Lithuania and Spain-Catalonia, laissez faire with alcohol control, while in the UK, Romania and Estonia support for alcohol control is relatively high, competing either with education or the laissez faire approach.

Part B

Daniela Piontek, Julian Maron, Ludwig Kraus, & RARHA-HARMES group*

HARMONISING ALCOHOL-RELATED MEASURES IN EUROPEAN SURVEYS (RARHA-HARMES)

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B1 Methods

B1.1 Description of included surveys

Inclusion criteria

The following inclusion criteria for national surveys were defined:

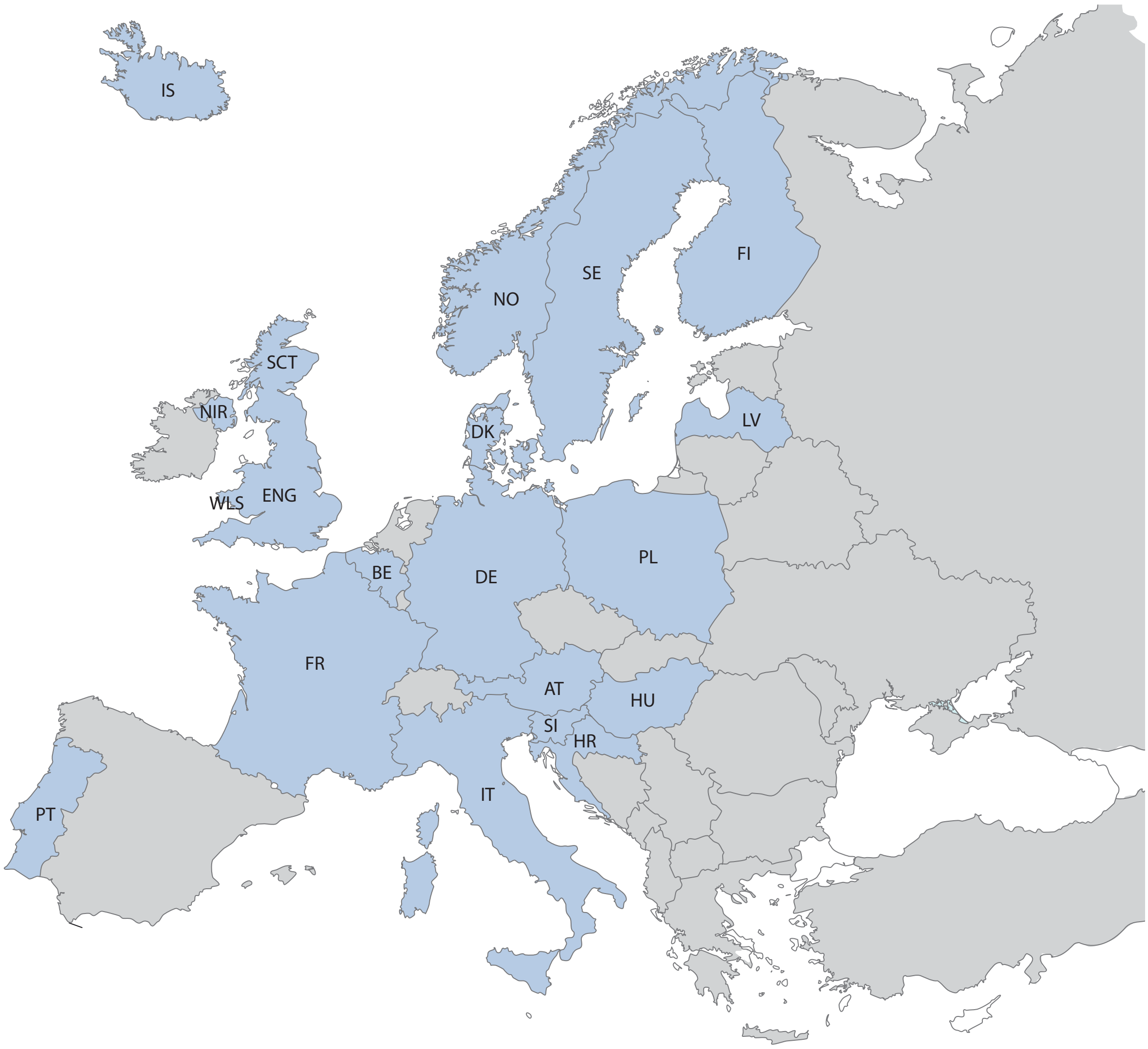
- survey conducted between 2008 and 2013;
- general population survey including information on alcohol consumption and/or alcohol-related harm (no targeted populations);
- nationwide data (no regional surveys),
- age range: at least 18-64 years.

With these inclusion criteria it was ensured that data were not too old and had not been used in earlier cross-national comparisons such as GENACIS.

Participating countries and surveys

RARHA-HARMES includes data from 20 European countries. The coverage of regions is displayed in Figure 1.1. In general, surveys from all over Europe are included in the dataset representing different drinking cultures and survey histories. For descriptive purposes, countries are grouped in four regions: Northern Europe covers Iceland, Norway, Sweden, Finland, Latvia and Denmark. Central Europe includes England, Scotland, Wales, Northern Ireland, Belgium, Germany, France and Austria. Eastern Europe includes Poland and Hungary. Southern Europe covers Slovenia, Croatia, Italy and Portugal.

Figure 1.1. Overview of participating countries in RARHA-HARMES



In total, 24 surveys were included in the European dataset. Most countries contributed one survey, Germany and Iceland contributed two surveys, and Denmark submitted three surveys for the European dataset. Table 1.1. Summary of included surveys shows an overview of all surveys including original survey names, English names as well as acronyms that will be used throughout the report.

Table 1.1. Summary of included surveys

	Survey name	Year	Acronym
Austria	Österreichweite Repräsentativerhebung zu Substanzgebrauch Austrian National Survey on Substance Use	2008	AT_08
Belgium	Enquête de santé (Belgique 2013) Gezondheidsenquête (België 2013) Health Interview Survey (Belgium 2013)	2013	BE_13
Croatia	Zlouporaba sredstava ovisnosti u općoj populaciji Republike Hrvatske Substance abuse among the general population in the Republic of Croatia	2011	HR_11
Denmark	Alkoholforbrug i Danmark Alcohol consumption in Denmark	2008	DK_08
Denmark	Den Nationale Sundhedsprofil 2010 The Danish National Health Survey 2010	2010	DK_10
Denmark	Den Nationale Sundhedsprofil 2013 The Danish National Health Survey 2013	2013	DK_13
Finland	Juomatapatutkimus Finnish Drinking Habits Survey	2008	FI_08
France	Baromètre santé Health Barometer	2010	FR_10
Germany	Epidemiologischer Suchtsurvey Epidemiological Survey of Substance Abuse	2009	DE_09
Germany	Epidemiologischer Suchtsurvey Epidemiological Survey of Substance Abuse	2012	DE_12

	Survey name	Year	Acronym
Hungary	Európai Lakossági Egészségfelmérés - ELEF2009 European Health Interview Survey - EHIS2009	2009	HU_09
Iceland	Rannsókn á áfengisneyslu Alcohol survey	2013	IS_13
Iceland	Heilsa og líðan Íslendinga 2012 Health and Wellbeing of Icelanders 2012	2012	IS_12
Italy	Indagine Multiscopo sulle famiglie: aspetti della vita quotidiana Multipurpose survey on households: aspects of daily living	2012	IT_12
Latvia	Latvijas iedzīvotāju pētījums par atkarību izraisošo vielu lietošanu Population Survey about Substance Use	2011	LV_11
Norway	Befolkningsundersøkelse om tobakk og rusmiddelbruk Population Survey on tobacco and substance use	2012	NO_12
Poland	Wzory konsumpcji alcoholu w Polsce Patterns of alcohol consumption in Poland	2008	PL_08
Portugal	Inquérito Nacional ao Consumo de Substâncias Psicoativas na População Geral, Portugal 2012 General Population Survey on Drugs, Portugal 2012	2012	PT_12
Slovenia	Anketa o tobaku, alkoholu in drugih drogah Survey on the Use of Tobacco, Alcohol and Other Drugs	2012	SI_12
Sweden	Vanor och konsekvenser Habits and consequences	2013	SE_13

	Survey name	Year	Acronym
England	Health Survey of England	2013	ENG_13
Wales	Welsh Health Survey	2013	WLS_13
Scotland	Scottish Health Survey	2013	SCT_13
Northern Ireland	Health Survey: Northern Ireland	2010	NIR_10

Survey characteristics

Table 1.2 gives an overview of the basic characteristics of the included surveys. All data were collected between 2008 and 2013 with the majority of surveys conducted in 2012 (six surveys) and 2008 (four surveys). Thirteen surveys used a complex multistage sampling procedure with two or more sampling stages. In eleven surveys, a simple random sampling was applied. Response rates varied between 34% and 77%.

Survey mode varied between the participating countries. Face-to-face interviews were conducted in seven surveys, and seven further surveys used a combination of face-to-face interviews and paper-and-pencil questionnaires or computer-assisted self-interviews for specific survey sections. Mixed survey modes, telephone interviews and internet-based questionnaires were applied in three surveys. Paper-and-pencil questionnaires were used in one survey.

With regard to the context of the survey, three major groups can be distinguished: alcohol only surveys, drug surveys and general health surveys. The majority of eight surveys each covered questions on different kinds of legal and illegal drugs or embedded alcohol questions in a general health survey. Pure alcohol surveys were used in five cases. Two surveys were conducted in specific contexts (household daily life; health and alcohol).

The age range of the surveys was diverse. Most studies started at age 15 or sixteen, one survey included 11 year olds and five surveys included those aged at least 18. The upper age limit was 64 in five surveys, whereas twelve surveys were not limited to a specific age. The remaining studies applied different age limits between 69 and 99. For reasons of comparability, all survey data were restricted to 18 to 64 years, resulting in sample sizes between 863 and 129,536.

Table 1.2. Basic survey characteristics

	Survey year	Survey mode	Survey context	Age range	Sampling design	Response rate (%)	Sample size 18-64 years
Austria	2008	Face-to-face	Drugs and alcohol	15-99	Two-stage probability design with oversampling younger birth cohorts	34.4	3,128
Belgium	2013	Face-to-face computer-assisted interview (CAPI) + paper-and-pencil self-administered for sensitive topics	Health	15+	Multistage sampling design (geographical stratification, clusters, households and individuals)	55.0	4,749
Croatia	2011	Face-to-face	Tobacco, alcohol and drugs	15-64	Multistage stratified sample using random choice of units within strata	53.1	4,519
Denmark	2008	Self-administered survey conducted by mail or internet	Alcohol and drugs	16+	Region- and age-stratified random sample	57.4	3,133
Denmark	2010	Self-administered survey conducted by mail or internet	Health	16+	Stratified random sample of municipalities	59.5	129,536
Denmark	2013	Self-administered survey conducted by mail or internet	Health	16+	Stratified random sample of municipalities	54.0	111,314
Finland	2008	Face-to-face and auxiliary paper-and-pencil	Alcohol	15-69	Simple random	73.6	2,381

Table 1.2 cont.

	Survey year	Survey mode	Survey context	Age range	Sampling design	Response rate (%)	Sample size 18-64 years
France	2010	Telephone	Health	15-85	Two-stage random sampling (household and individuals)	60.0	21,818
Germany	2009	Mixed mode (paper-and-pencil, telephone, online)	Drugs and alcohol	18-64	Two-stage probability design with oversampling younger birth cohorts and undersampling older birth cohorts	50.1	7,983
Germany	2012	Mixed mode (paper-and-pencil, telephone, online)	Drugs and alcohol	18-64	Two-stage probability design with oversampling younger birth cohorts and undersampling older birth cohorts	53.6	9,081
Hungary	2009	Face-to-face	Health	15+	Two-stage probability design	72.1	3,853
Iceland	2013	Online	Alcohol	18 +	Simple random	66.3	1,096
Iceland	2012	Paper-and-pencil	Health and alcohol	18-79	Random sample stratified by age and residency (capital area, non-capital area)	67.2	4,419
Italy	2012	Face-to-face with paper-and-pencil for questions on demographics and alcohol	Household daily life	11+	Two-stage sampling (municipalities and families)	79.8	28,618
Latvia	2011	Face-to-face	Drugs	15-64	Stratified sample of households (level of urbanization, development index of the municipality, region)	62.3	3,961
Norway	2012	Telephone	Tobacco, alcohol and drugs	16-79	Simple random probability design with oversampling of younger birth cohorts	53.3	1,561

	Survey year	Survey mode	Survey context	Age range	Sampling design	Response rate (%)	Sample size 18-64 years
Poland	2008	Face-to-face	Alcohol	18+	Sample was stratified by the community size within 16 regions	47.0	863
Portugal	2012	Face-to-face	Drugs and alcohol	15-74	Multi-stage sample design (municipalities, area segments, households and individuals)	47.5	5,089
Slovenia	2011/ 2012	Mixed mode (online, telephone, face-to-face)	Drugs, tobacco and alcohol	15-64	Stratified two-stage probability sample	52.9	7,049
Sweden	2012	Paper-and-pencil or online-questionnaire	Tobacco, alcohol and drugs	17-84	Simple random	59.3	11,011
England	2013	Face-to-face and paper-and-pencil	Health	16+	Complex random probability sample	56.0	6,324
Latvia	2011	Face-to-face	Drugs	15-64	Stratified sample of households (level of urbanization, development index of the municipality, region)	62.3	3,961
Wales	2013	Face-to-face	Health	16+	Complex probability (household and individuals)	77.0	10,871
Scotland	2013	Face-to-face and paper-and-pencil	Health	16+	Complex random probability sample	56.0	3,586
Northern Ireland	2010	Face-to-face and computer assisted self-interview	Health	16+	Simple random	65.0	3,069

Coverage rates were computed to measure the proportion of all alcohol actually consumed in each country that is reported in surveys. The coverage rate is derived as the mean of estimated volume of drinking divided by estimated per capita sales. Estimated volume of drinking was calculated from the survey data, per capita sales were taken from the statistics of the World Health Organisation (WHO, 2016). In cases where per capita data were not available for the specific year in which the survey was conducted, the nearest available year was considered. It needs to be mentioned that per capita data refer to all people aged 15 years and older, whereas the survey estimates are restricted to 18- to 64-year olds.

Table 1.3. Coverage rates of the included surveys (percent) shows the survey coverage rates for the three main beverages – beer, wine and spirits – as well as total consumption. There was large variation between surveys. The mean coverage rate for total consumption was 46.6%. The coverage was much lower than average in Croatia (HR_11: 20.5%), Slovenia (SI_11: 21.0%) and France (FR_10: 24.5%), whereas it was above average in Hungary (HU_09: 77.7%), one Danish survey (DK_08: 77.0%) and Portugal (PT_12: 74.1%). Coverage rates for beer and wine were higher than for spirits (beer: 56.0%, wine: 55.0%, spirits: 45.3%). Interestingly, some survey estimates yielded higher volume estimates than per capita consumption. This was the case for spirits in Denmark (DK_08: 119.8%) and for both beer and wine in Hungary (HU_09: 126.1% and 125.9%).

Table 1.3. Coverage rates of the included surveys (percent)

Survey	Beer	Wine	Spirits	Total
IS_12	.	.	.	31.3
IS_13	45.8	54.5	40.4	41.0
NO_12	62.2	64.6	54.1	62.2
SE_13	.	.	.	.
FI_08	47.6	51.2	35.3	44.4
DK_08	77.4	79.2	119.8	77.0
DK_10	66.6	48.9	73.3	58.7
DK_13	67.4	49.8	59.5	57.4
ENG_13	.	.	.	.
SCT_13	.	.	.	.
WLS_13	.	.	.	.
NIR_10	.	.	.	.
BE_13	.	.	.	54.7
DE_09	38.9	57.1	14.4	41.1
DE_12	38.0	48.8	15.0	39.0
FR_10	.	.	.	24.5
AT_08	.	.	.	38.9

Survey	Beer	Wine	Spirits	Total
LV_11	48.7	41.6	48.5	48.6
PL_08	29.5	16.7	24.1	26.1
HU_09	126.1	125.9	62.7	77.7
SI_12	26.6	18.4	33.7	21.0
HR_11	28.6	34.1	18.3	20.5
IT_12	.	.	.	.
PT_12	80.4	79.4	35.1	74.1

. = no data available

B1.2 Survey measurements

The key concepts to be included in the project were separated into the categories "alcohol consumption", "alcohol-related harm", "other alcohol-related measures", and "sociodemographics". Based on the standard form "survey instruments" (see Appendix X), the availability of a broad range of alcohol-related measures commonly used in alcohol surveys as well as sociodemographic indicators was documented by the national data holders. Based on this information, a questionnaire map was prepared including the English translation of national alcohol and sociodemographic questions, including response categories and item numbers. For consideration in the data analyses, only those alcohol-related measures were selected which were available in at least two surveys. That way, 106 variables of interest were selected in total (alcohol consumption: 36 variables; alcohol-related harm: 33 variables; other alcohol-related measures: 17 variables; sociodemographics: 20 variables).

Alcohol consumption

Table 1.4 summarizes the availability of alcohol consumption measures. The most important concepts used in the European dataset are abstention, generic frequency and drinking volume. In addition, episodic heavy drinking, subjective drunkenness and age of onset of drinking were included.

Table 1.4. Availability of alcohol consumption measures

Alcohol consumption measures	Availability (# surveys)
Abstention	24
Generic frequency	23
Drinking volume	
Beverage-specific quantity-frequency (BSQF)	19
Generic quantity-frequency	2

Alcohol consumption measures	Availability (# surveys)
Episodic heavy drinking (EHD)	18
Subjective drunkenness	7
Age of onset	10

Abstention

The 12-months prevalence of abstinence was available for each survey. However, different questions were used to build this indicator. Several surveys included a specific question on any drinking in the last 12 months (e.g., "Did you drink any alcohol in the past 12 months?"). In other surveys, abstainers were identified using a 12-months frequency measure (e.g., "How often did you drink alcohol in the past 12 months?", response category "never"). Finally, some surveys used questions concerning the time of the last drink (e.g., "When did you have your last alcoholic drink?", response categories "within the past 12 months" or shorter time periods).

Generic frequency

A generic drinking frequency measure was available for each survey except Italy. A typical question read "How often did you have alcoholic drinks of any kind (beer, wine, spirits, liqueurs or other alcoholic beverages)?". In 18 surveys, the time frame of the question was 12 months, while in some cases the question referred to the last 30 days (3 surveys) or the last 7 days (2 surveys). In 21 surveys, pre-defined response categories were used in order to measure number of drinking days. The number of response categories varied from 4 to 11. In the case of Austria and Germany, the exact number of drinking days was collected via an open-ended question.

Drinking volume

The most frequently applied method to assess drinking volume was the beverage-specific quantity-frequency (BSQF), which was used in 19 surveys. The national BSQF measures differed with regard to the time frame and the number and kind of assessed beverages. With the exception of Austria, Croatia, Denmark, Finland, Hungary and Norway, all surveys used the time frame of the last 12 months. Norway used the last 30 days; Hungary used the last 7 days; and Denmark used a typical week. In Croatia and Finland, the questions for asked for "usually", whereas Austria considered "yesterday". All surveys included questions on beer, wine and spirits. Some surveys also used sub-categories of these beverages based on alcohol content (e.g., low strength beer and high strength beer). A variety of other beverages was assessed depending on the national availability and importance. The number of beverages used varied between 3 (7 surveys) and 8 (1 survey). In Belgium and France, the assessment of drinking volume was conducted via a generic quantity-frequency measure, i.e. no distinction between specific beverages was applied.

Episodic heavy drinking (EHD)

Frequency of episodic heavy drinking (EHD) was available in 18 surveys. A typical question read "How often have you had <number of drinks> or more drinks containing alcohol on one occasion?". In 15 surveys, the time frame for the question was 12 months, while in some cases the question referred to the last 30 days (2 surveys) or the last 7 days (1 survey). The number of pre-defined response categories varied from 5 to 12. In the case of Germany, the exact number of EHD days was collected with an open-ended question. The number of standard drinks defined as the threshold for EHD ranged from 3+ drinks to 6+ drinks, and the corresponding range of grams of pure alcohol varied from 50 to 84 grams (Table 1.5). The most commonly applied threshold (7 surveys) was 6+ drinks. In Poland, EHD was not measured by the number of standard drinks but by giving beverage-specific quantities as orientation. With the exception of Austria and Slovenia, no survey applied gender-specific thresholds.

Table 1.5. Overview of country-specific definitions of standard drinks and thresholds for episodic heavy drinking (EHD)

	Standard drink (grams of pure alcohol)	EHD measure definition	
		Number of standard drinks	Grams of pure alcohol
Austria	20	3+ (males), 2+ (females)	60 (males), 40 (females)
Belgium	10	6+	60
Croatia	10	6+	60
Denmark	12	5+/6+	60/72
Finland	12	5+	60
France	10	6+	60
Germany	14	5+	70
Hungary	10	6+	60
Iceland	10-12	5+	50-60
Italy	12	6+	72
Latvia	12	5+	60
Norway	12-14	6+	72-84
Poland	10	Beer: >1.5 l, Wine: >600 ml, Vodka: >180 ml	60
Portugal	10	5+	50
Slovenia	10	6+ (males) 4+ (females)	60 (males) 40 (females)
Sweden	12	Beer (strong): 4 cans, Beer (light): 6 cans, Wine: 1 bottle (75 cl), Spirits: 5 shots (25 cl)	48-75
UK	8	n.a.	n.a.

n.a. = not applicable

Subjective drunkenness

Frequency of subjective drunkenness was available in 7 surveys. Definitions and assessment of being drunk varied between the surveys: wordings included "strongly intoxicated" (AT), "you feel it hard" (FI), "drunk" (FR), "really drunk" (DE), "clearly intoxicated", "intoxicated or drunk (either you felt unsteady on your feet, your speech was slurred, and/or did not remember what happened after, for example)" (PT). In all cases, the last 12 months were used as reference period. In France, Germany and Portugal, respondents could specify the exact number of times they had been drunk, while pre-defined answer categories were used in the other surveys.

Age of onset

Age of onset was available in 10 surveys. A typical question read "How old were you when you drank alcohol for the first time?" (5 surveys). Other surveys were more specific by not counting sips (e.g. "Not counting small sips, how old were you when you started drinking alcoholic beverages?"), but at least a glass of alcohol (e.g. "How old were you when you drank at least 1 glass of alcohol for the first time?"). Respondents could mention the exact age instead of defined response categories in all surveys.

Alcohol-related harm

Table 1.6 illustrates the availability of alcohol-related harm measures. In brief, measures can be divided into short screening instruments, clinical diagnoses and single item indicators.

Table 1.6. Availability of alcohol-related harm measures

Alcohol-related harm measures	Availability (# surveys)
Screening instruments	
AUDIT	8
CAGE	4
Clinical diagnoses	
DSM-IV abuse	2
DSM-IV dependence	3
Single item indicators	
Acute problems (5 indicators)	4 to 10
Chronic problems (11 indicators)	2 to 12

Alcohol Use Disorders Identification Test (AUDIT)

The most commonly used instrument was the Alcohol Use Disorders Identification Test (AUDIT) which was applied in eight surveys. The reference period applied to the AUDIT questions was the last 12 months in all surveys. With regard to AUDIT item 1 (drinking frequency), France differed from the standard instrument by using a beverage-specific instead of a generic measure. The number of response categories ranged from 5 to 10. In the case of Germany, the exact number of drinking days was collected. With regard to the second AUDIT item (quantity), the standard question asks for the number of glasses of alcohol on a typical drinking day which was used in most surveys. As an exception, Germany applied a beverage-specific measure. The threshold used for episodic heavy drinking (AUDIT item 3) varied from 5+ drinks to 6+ alcohol drinks. In Poland, it was asked for "1.5 l of beer, 600 ml of wine, or 180 ml of vodka".

Regarding items on alcohol-related harm, item 4 (impaired control over drinking), item 7 (feeling guilt after drinking), item 8 (blackouts), and item 9 (alcohol-related injuries) were similarly collected across all surveys. A typical question on item 5 (role failure) read "How often during the last year have you failed to do what was normally expected from you because of drinking?" However, in Poland, this item was collected by asking "How often in the past year because of drinking alcohol you did something wrong, against the social norms accepted in your environment?" Item 6 (morning drinking) was typically assessed by asking "How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?" Slight variations existed in the German, Icelandic, and Polish survey (e.g. without the affix "after a heavy drinking session", or "day" instead of "morning"). Item 10 (others concerned) was similarly collected across all surveys, with the exception of Iceland where only two response categories where applied (instead of three in all other surveys). Apart from that, response categories for the items on alcohol-related harm (AUDIT items 4-10) followed the standard instrument.

Problematic drinking was diagnosed if the AUDIT score was 8 or higher.

CAGE

The CAGE instrument was available in four surveys (Belgium, 2x Denmark, Portugal). Variations existed with regard to the applied reference period. Lifetime was used in the Belgian survey, the last 12 months in the two Danish surveys, while both periods were applied in the Portuguese survey. Only slight differences existed concerning the wording of the individual CAGE items.

Clinical diagnoses

DSM-IV abuse criteria were available in two surveys (Germany, Sweden). However, collection of the criteria slightly differed between the two surveys with regards to the wording of the questions. In addition, in the German survey, the fourth DSM-IV abuse criterion (continued drinking despite social trouble) was not measured by one single item (as in the case of Sweden) but by four separately asked questions considering social problems (2 items), financial problems (1 item) and alcohol-related injuries (1 item). The last 12 months were consistently used as reference period. Alcohol abuse was diagnosed if any one out of the four criteria was positive.

DSM-IV dependence criteria were collected in three surveys (Germany, Sweden, Latvia). Apart from differing wordings, some criteria were measured by multiple items in Germany and Latvia, while in the Swedish survey each criterion was measured by a single item. With regard to the second DSM-IV criterion, different withdrawal symptoms were considered in the questions (Germany: 9 symptoms, Latvia: 4 symptoms, Sweden: 3 symptoms). For the third DSM-IV dependence criterion (impaired control over drinking), drunkenness was considered in the German and Latvian surveys in addition to the standard question on drinking larger amounts than intended (Germany: "Did you repeatedly drink alcohol and find it difficult to stop before being drunk?", Latvia: "Did you have times during the past 12 months when you started drinking and became drunk when you didn't want to?"). The last 12 months were used as reference period in all three surveys. Alcohol dependence was diagnosed if any three out of the seven criteria were positive.

Single item indicators

A few single criteria on alcohol-related harm are comparable across different harm instruments (AUDIT, CIDI, CAGE). For instance, the item "Have you felt guilty after drinking" is part of the AUDIT but also of the CAGE. Another example is the role failure item, which is available in the AUDIT but also in the CIDI. In addition, this item was separately asked as a single item on social consequences in Finland and Slovenia.

Other alcohol-related measures

Table 1.7 summarizes the availability of other alcohol-related measures. In addition to unrecorded consumption, context of drinking and help-seeking behaviour, a total of 8 further concepts were included in the European dataset that were available for 2 to 4 single surveys. Due to lack of space results on these indicators are not reported in this report.

Table 1.7. Availability of other alcohol-related measures

Indicator	Availability (# surveys)
Unrecorded consumption	3
Context of drinking	7
Help-seeking behaviour	5
Others	
Attitudes towards drinking in general	2
Attitudes towards drinking in special contexts	2
Attitudes towards alcohol policy	4
Knowledge of alcohol policy	3
Drinking motives	2
Drinking problems in family	3
Problem awareness	2
Motivation for change	2

Unrecorded consumption

Information on unrecorded consumption was available in three surveys (Iceland, Finland, Slovenia). On the one hand, prevalence of unrecorded consumption was assessed, and typically measured by asking "During the past 12 months, have you brought alcohol from abroad?". On the other hand, information on quantity of alcohol brought from abroad was assessed, and typically measured by asking "How many litres of alcoholic beverages, in total, during the last 12 months, have you brought from other countries?". In all cases, quantities were collected beverage-specific.

Context of drinking

Two types of information on drinking context can be compared across surveys: frequency of drinking with meals (Iceland, Finland, Italy, Portugal) and frequency of drinking on premise (Norway, Finland, Portugal). Response categories for these items differed substantially between the surveys. In Portugal, for example, respondents could choose between four unspecific response categories ("often", "sometimes", "rarely", "never"), while in Finland, 11 much more concrete response categories were provided ("daily", "4-5 times per week", …, "never").

Help-seeking behaviour

12-months prevalence of help-seeking behaviour was provided in five surveys (Denmark, Germany, Poland, Croatia, Portugal). A typical question reads "Did you call upon help due to your own alcohol consumption within the last 12 months?". However, a variety of definitions of "help" was used ranging from "some kind of help" (Poland), "any health institution" (Croatia, Portugal) or "general practitioner" (Denmark) to a very detailed list of seven different health institutions (general practitioner, psychotherapist, out-patient counselling, etc.) (Germany).

Sociodemographics

The availability of sociodemographic measures is summarized in Table 1.8. Age and sex were the two most basic variables available in each survey. Among the other measures not further described in the text are area of living (urban/rural), religious affiliation and body weight and height.

Table 1.8. Availability of sociodemographic measures

Sociodemographic indicator	Availability (# surveys)
Age	24
Sex	24
School education	24
Income	18
Employment status	20
Marital status	21
Country of birth	8
Others	
Area of living	8
Religious affiliation	5
Body weight	14
Body height	13

School education

Level of school education was available for each survey. It was typically assessed by asking for the "highest educational graduation". However, response categories strongly varied by survey. The number of response categories ranged from 6 (e.g. Norway: "primary and secondary school", "high school", "university (4 years or less)", "university (more than four years)", "PhD level", "other") to 14 categories (e.g. Belgium: "primary education", "lower vocational secondary education", "lower technical, art or professional education", "higher vocational secondary education", "higher technical secondary education", "higher art secondary education", "higher professional education", post-secondary non higher education", "higher education (short type)", "higher education (long type)", "academic education", "post academic training", "doctorate", "other"). Denmark was the only exception measuring level of school education by asking for duration of education (e.g. "7 years or fewer at school").

Income

Information on income was available for 18 surveys. A typical question on income read "What is the amount of your net household income? We mean the sum of wages, salary, income from self-employment, or pension. Please also count income from official grants, leasing and renting, housing subsidy, children's allowance or other income and subtract taxes and social security fees". Typically, pre-defined response categories were provided, e.g. "less than 500 Euros", "500 to 750 Euros",…, "more than 5000 Euros". However, the number of response categories as well as the description of the categories varied a lot. In the case of Austria, Belgium, Norway, Poland, and Sweden, respondents could indicate the exact, non-categorized income.

Employment status

Information on the employment status was available for 20 surveys. A typical question to assess the employment status of a person was "What is your current employment status?" A broad variety of country-specific response categories was available, with the number of predefined categories varying from 3 to 20 categories. Categories which were available in each survey are "employed (full/part time)" and "unemployed".

Marital status

Marital status was available for 21 surveys. The question typically read "What is the legal marital status of every member of your household?" The categories "single", "married", "widowed" and "divorced" were available in each survey. Some surveys had additional categories such as "registered partnership", "cohabiting", or distinguished between "married" and "married but separated".

Country of birth

Information on the country of birth was available for eight surveys, and a typical question read "In which country were you born?" Most surveys provided one response category for the country of the survey, and an additional open response option for respondents born in another country. The Italian survey distinguished between "born in the same municipality", "born in another municipality" and "born in another country". In the Norwegian survey, respondents born abroad could not specify the exact country of birth but the world region ("Europe", "Asia", "Africa", etc.). The Swedish survey provided four response categories: "born in Sweden", "born in another Nordic country", "born in another European country", and "born in a country outside Europe".

B1.3 Data editing

Achieving a high degree of comparability between surveys with different methodologies and different backgrounds turned out to be the main challenge of the sub-project. Based on the questionnaire map and national questionnaires as well as the questionnaire and codebook used in RARHA-SEAS, a preliminary codebook of the European dataset was developed. This included unique variable names, variable labels, and value labels that represented the target variables for recoding the national datasets. The applicability of the created variables was tested by recoding selected national datasets. Based on these experiences, some adaptations in variables and labels were made. Subsequently, matching of variables was conducted, i.e. variables of all national datasets were recoded into variables of the common European dataset in a consistent manner. This task required the syntax-based harmonization of data from 24 surveys from 17 European countries. In order to ensure a consistent proceeding, general rules for recoding national variables were applied.

Missing values

It was considered important that there are no system missing values in the harmonized dataset and as far as possible that missing values are coded in a similar way across surveys. There was considerable variation between countries in the number and types of missing values in their data. In order to reduce the complexity of the data, it was decided to create as few missing values in the European dataset as possible. It was therefore agreed that four types of missing values should be used. Surveys that had a wider range of missing values were recoded based on the description in Table 1.9.

Table 1.9. Types of missing values in harmonized dataset

Missing value	Label	Description
.a	Question not asked	Question not included in national survey
.b	Mismatch of categories	Question exists, but answer categories cannot be transformed into harmonized codes
.c	Question skipped	Inapplicable because of a skip
.d	No valid answer	„Don't know", active refusal, unspecified missing

Assignment of numerical values

As a general rule, the same numerical values were assigned to the same categories, i.e. coding of categorical variables was done in a consistent manner. For example, in the national datasets the variable sex was sometimes coded 1 for females and 2 for males, while it was coded 0 for females and 1 for males in others. The standardized coding used 0 for females and 1 for males.

Frequency scales

Questions about frequencies differed considerably across surveys due to different answer formats (open-ended vs. closed-ended questions) and inconsistent response categories. In addition, the use of different reference periods resulted in different meanings of a single category. For example, frequency of drinking was most often collected via a closed-ended question. However, the definition and number of response categories were not consistent across the different surveys. In the case of Croatia, for instance, 4 defined response categories were provided ("4 times a week or more", "2-3 times a week", "2-4 times a month", "once a month or less"), while other cases such as Latvia provided 10 categories. In addition, in other surveys the frequency was assessed with an open-ended question measuring the exact number of drinking days in the last 12 months (Austria, Germany). In order to make these different measurements comparable, all responses were converted into a numeric format indicating the annual number of drinking days. To this end, answers to open-ended questions referring to the last 12 months were left as they were, whereas numeric values were assigned to response categories. For categories covering a range (e.g., 5 to 6 days), the mid-point was used (e.g., 5.5). Table 1.10 illustrates an example for the conversion of response categories.

Table 1.10. Example for conversion of categorical variables into numeric format

Response category (Latvia)	Conversion into numeric format
Every day (in last 12 months)	365
5-6 days a week (in last 12 months)	5.5*52 = 286
3-4 days a week (in last 12 months)	3.5*52 = 182
1-2 days a week (in last 12 months)	1.5*52 = 78
2-3 days a month (in last 12 months)	2.5*12 = 30
Once a month (in last 12 months)	1*12=12
6-11 days a year (in last 12 months)	8.5

Response category (Latvia)	Conversion into numeric format
2-5 days a year (in last 12 months)	3.5
Once (in last 12 months)	1
Never (in last 12 months)	0

Reference period

In order to enable comparability of results, the reference period for all calculated variables was set at the last 12 months. This decision was corroborated by the fact that this was the most widely used time frame considered in national surveys. However, several surveys applied other recall periods for specific indicators (mostly the last 30 days or the last 7 days) where it was necessary to project from these shorter recall periods to the last 12 months. When drinking frequencies were collected using a reference period of 30 days or 7 days, answers were multiplied by 12 or 52 in order to achieve a consistent time frame of 12 months. Similarly, some surveys collected information on drinking quantities for the last 30 days, the last 7 days or yesterday. The resulting estimates were thus multiplied by 12, 52 or 365. An example for the projection of drinking frequencies is illustrated in Table 1.11.

Table 1.11. Example for projection from shorter recall periods to 12 months

Response category (Denmark)	Projection to 12 months
7 days (per week)	7*52=365
6 days (per week)	6*52 = 312
5 days (per week)	5*52 = 260
4 days (per week)	4*52 = 208
3 days (per week)	3*52 = 156
2 days (per week)	2*52 = 104
0-1 days (per week)	0.5*52 = 26

Drinking quantities

The most complex part of recoding at the national level was the recalculation of drinking quantities into grams of pure alcohol per day and volume of pure alcohol per year. The most commonly used instrument for assessing drinking quantities was the beverage-specific quantity-frequency measure (BSQF). For two countries (BE, FR), the BSQF was not available and a generic quantity-frequency measure was used. Information necessary for the calculation of drinking quantities was provided by national data holders: glass sizes of beverages, beverage-specific alcohol contents, and/or definition of a standard drink.

Based on the standard formula given below, national information was used to calculate (beverage-specific) grams of pure alcohol per day:

Grams of pure alcohol/day = number of drinking days per year * number of glasses on typical drinking occasion * glass size in litres * alcohol content * alcohol weight * 1000 / 365

Beverage-specific glass sizes and beverage-specific alcohol contents provided by national data holders are summarized in Table 1.12 and Table 1.13. As an example, Denmark used glass sizes of 0.33 l for beer, 0.12 l for wine and 0.04 l for spirits as well as corresponding alcohol contents of 4.6%, 12.0% and 40.0%. Assuming that the number of drinking days in the last year was

150 for beer, 50 for wine and 70 for spirits and that the typical number of drinks per occasion was 3 for each beverage, the calculation of drinking quantities would look as follows:

- Grams of pure alcohol/day (beer) = 150 * 3 * 0.33 * 0.046 * 0.794 * 1000 / 365 = 14.86 grams
- Grams of pure alcohol/day (wine) = 50 *3 * 0.12 * 0.12 * 0.794 * 1000 / 365 = 4.70 grams
- Grams of pure alcohol/day (spirits) = 70 * 3 * 0.04 * 0.40 * 0.794 * 1000 / 365 = 7.31 grams
- Grams (beer) + grams (wine) + grams (spirits) = 26.87 grams of pure alcohol/day

Table 1.12. Country-specific glass sizes for beer, wine and spirits (litres)

	Beer	Wine	Spirits
Austria	0.2; 0.33; 0.5	0.125; 0.25	0.02; 0.04
Belgium	0.25	0.10	0.03
Croatia	0.33 - 0.5	0.20	0.03
Denmark	0.33	0.12	0.04
Finland	0.33	0.12	0.04
France	0.25; 0.33; 0.5	0.10; 0.25; 0.75	0.03; 0.06
Germany	0.2-0.33; 0.4-0.5	0.2-0.25	0.02; 0.04
Hungary	0.2-0.33; 0.4-0.5	0.10	0.02-0.03; 0.04-0.05
Iceland	0.33; 0.5	0.125-0.25	0.03
Italy	0.33; 0.66	0.125	0.04
Latvia[1]	n.a.	n.a.	n.a.
Norway	0.33; 0.4; 0.5; 0.6	0.15; 0.75	0.04; 0.7
Poland[2]	n.a.	n.a.	n.a.
Portugal	0.20; 0.33; 0.5	0.15; 0.375; 0.75	0.05
Slovenia	0.25	0.1	0.03
Sweden	0.33	0.12	0.04
United Kingdom	0.28; 0.33; 0.44; 0.5	0.175	0.025

n.a. = not applicable; calculation of quantities by asking for standard drinks (1) or millilitres (2)

Table 1.13. Country-specific alcohol contents for beer, wine and spirits (percent)

	Beer	Wine	Spirits
Austria	5.0	12.0	40.0
Belgium[1]	n.a.	n.a.	n.a.
Croatia	5.0	12.5	40.0
Denmark	4.6	12.0	40.0
Finland	4.59	12.76	35.08
France	5.0	12.5	40.0
Germany	4.8	11.0	33.0
Hungary	5.0	11.5	40.0
Iceland	5.0	12.0	40.0
Italy	4.5; 8.0-9.0	12.0	36.0-40.0
Latvia[2]	n.a.	n.a.	n.a.
Norway	4.5	12.0	40.0
Poland	5.0	12.0	40.0
Portugal	6.0	12.0	40.0
Slovenia	5.0	11.0	40.0
Sweden	3.15; 5.54	12.9	37.6
United Kingdom	< 6; ≥6	12.0	40.0

n.a. = not applicable;
[1] no beverage-specific but generic calculation of quantities;
[2] calculation of quantities by asking for standard drinks in grams of pure alcohol

Volume of pure alcohol per year

On the basis of grams of pure alcohol per day, volume of pure alcohol per year (in litres) was computed in a second step according to the formula below.

- Volume of pure alcohol per year (litres) = grams of pure alcohol per day * 365 / alcohol weight / 1000
- For the example from Denmark given above, the application of this formula results in the following calculation:
- Volume of pure alcohol per year = 26.87 * 365 / 0.794 / 1000 = 12.35 litres of pure alcohol per year

Daily hazardous drinking

In addition to overall consumption, an indicator to assess daily heavy drinking was calculated. For this variable, international accepted cut-offs were used (English et al., 1995). According to these, an average consumption of more than 20 grams of pure alcohol per day for females and more than 40 grams of pure alcohol per day for males is associated with an increased risk for negative consequences. A dichotomous variable based on these cut-offs was calculated based on the grams of pure alcohol per day describe above.

Sociodemographics

In order to make school education comparable across surveys, country-specific response categories were recoded into three categories based on the International Standard Classification of Education (ISCED): 1 "low (primary + secondary I)", 2 "intermediate (secondary II + post-secondary/non-tertiary)", and 3 "high (tertiary I + tertiary II)". For more details on single categories please see OECD, Eurostat & UNESCO Institute for Statistics (2015).

In order to be able to use income in statistical analysis, relative income, that is, quintiles of per capita household-net-income, was calculated separately for each survey. Employment status was recoded into three groups: 1 "full/part time employed", 2 "unemployed", and 3 "others". With regard to marital status, four response categories were created: 1 "single", 2 "married", 3 "widowed", and 4 "divorced". Country of birth was collapsed into the categories "native" versus "born abroad".

Consistency checks and corrections

In order to reduce the number of missing values in the dataset, a pre-defined strategy of consistency checks and value corrections was applied. The major steps are summarised in the following:

- When the generic 12-months prevalence was missing, it was set at 1 if the corresponding 12 months frequency was indicated.
- Accordingly, when a beverage-specific 12-months prevalence was missing, it was set at 1 if the corresponding 12 months frequency was indicated.
- For lifetime and 12-months non-drinkers, consumption variables (e.g. frequency) for the past 12 months were set at 0.
- When drinking indicators (frequency measures, quantities, harm indicators) were missing, they were set at 0 if the 12-months prevalence was 0.
- When (generic/beverage-specific) frequency was missing, the corresponding quantity was set as missing.
- When (generic/beverage-specific) frequency was 0, the corresponding quantity was set at 0.

Merging national datasets

Once the recoding at national level was completed for each survey, original and irrelevant variables were deleted in order to achieve a consistent list of variables in each recoded national dataset. The resulting 24 single datasets were merged to one common European dataset. For this procedure, the consistency of variable ranges and labels was important. The final European dataset contained a total of 97 harmonized variables. These variables can be divided into alcohol consumption (36 variables), alcohol-related harm (36 variables), other alcohol-related measures (14 variables) and sociodemographics (11 variables).

B1.4 Analyses

Weighting

All national datasets were delivered with a weighting variable that considered the survey design and the distribution of demographic variables in the population of a given country. However, the procedure for calculating these weights differed substantially between countries, as did the amount and type of variables used for post-stratification. Moreover, due to the fact that the data were restricted to the age range 18 to 64 years, the original weighting variables could not be used for the common analyses.

Since the use of unweighted data introduces bias into population estimates, comparable post-stratification weights were calculated. A minimum requirement for the European analyses was a representative sample with regard to sex and age. Therefore, census data for all participating countries and survey years were retrieved from Eurostat (http://appsso.eurostat.ec.europa.eu/nui/show.do). Information was grouped in 14 sex * age strata (male, female; 18-19 years, 20-24 years, 25-29 years, 30-39 years, 40-49 years, 50-59 years, 60-64 years). By dividing the population proportion of each stratum by the empirical proportion of each stratum in the national datasets, a weighting variable was calculated.

Descriptive analyses

For descriptive purposes, weighted percentages or means and corresponding 95% confidence intervals (CI) were calculated for each survey. When comparing two survey estimates, overlapping confidence intervals indicate non-significant differences. Overall prevalence estimates and means are graphically shown as bar charts. Gender-specific estimates are displayed in tables.

Capping of drinking quantities

Following the approach used in RARHA-SEAS, the influence of extreme drinking quantities was analysed. If beverage-specific drinking quantities were reported to be higher than 50 cl of ethanol per day (equivalent to 397 g of pure alcohol), the corresponding value was set at 50 cl (397 g). Based on the original and capped drinking quantities per day, overall drinking volume per year in litres of pure alcohol was calculated. Mean original and capped drinking volumes were compared for each survey.

In the majority of surveys, capping of drinking quantities did not affect the estimates (Table 1.14). For a total of 8 surveys, there was some influence of extreme responses. Differences, however, were very small ranging from 0.01 litres (BE_13) to 0.51 litres (PT_12).

Table 1.14. Comparison of original and capped drinking volumes (litres per year)

Survey	Original	Capped	Difference
IS_12	4.30	4.30	0
IS_13	5.64	5.64	0
NO_12	8.40	8.40	0
SE_13	.	.	.
FI_08	9.62	9.62	0
DK_08	10.78	10.78	0
DK_10	16.35	16.28	0.07
DK_13	13.31	13.26	0.05
ENG_13	11.52	11.48	0.04
SCT_13	13.22	13.14	0.08
WLS_13	12.26	12.26	0
NIR_10	.	.	.
BE_13	15.37	15.36	0.01

Survey	Original	Capped	Difference
DE_09	11.6	11.6	0
DE_12	10.03	10.03	0
FR_10	9.47	9.47	0
AT_08	6.36	6.36	0
LV_11	10.17	10.17	0
PL_08	6.49	6.49	0
HU_09	17.23	17.15	0.08
SI_12	4.73	4.73	0
HR_11	4.74	4.72	0.02
IT_12	.	.	.
PT_12	16.59	16.08	0.51

. no data available

Gender ratios

In order to evaluate gender differences in drinking behaviour, male-female ratios were calculated for each indicator by dividing the estimated prevalence/mean among males by the estimated prevalence/mean among females. A gender ratio of 1.0 indicates identical prevalence/mean in both genders, whereas a ratio of 2.0 means a doubled prevalence/mean in females and a ratio of 0.5 indicates half the prevalence/mean of males.

Gender, age and SES effects

The independent effects of gender, age and socio-economic status (SES) were estimated by regression analyses including all three variables in a single model. Age was categorized into three groups (18-29 years, 30-49 years, 50-64 years). Socio-economic status was operationalized as highest completed level of education following the International Standard Classification of Education (ISCED) and categorized into three groups (low, intermediate, high). Male gender, the age group 18-29 years and high level of education were used as reference categories in the analyses. For prevalence indicators, logistic regression analyses were performed. Due to the highly skewed mean of alcohol consumption, generalized linear models with gamma distribution and log link function were applied. Results are presented as Odds Ratios (OR) or Incidence Rate Ratios (IRR) with corresponding 95% confidence intervals (CI). All statistical analyses were conducted using probability weights in order to enhance the distribution fit between samples and population regarding gender and age group.

Association between EHD and drunkenness

Associations between episodic heavy drinking (EHD) and subjective drunkenness were analysed by bivariate correlations at individual level. With regard to the dichotomous 12-months prevalence of EHD and drunkenness, tetrachoric rho coefficients were calculated, whereas Pearson correlation coefficients were calculated for the continuous variables 12-months frequency of EHD and drunkenness. Analyses were stratified by survey and gender. Due to missing values for either or both EHD prevalence/frequency and drunkenness prevalence/frequency, results can only be reported for six (prevalence) and seven (frequency) surveys, respectively.

Association between consumption and harm

Bivariate correlations between several alcohol consumption indicators and the harm diagnosis according to the Alcohol Use Disorders Identification Test (AUDIT) were calculated at the individual level and stratified by survey and gender. Alcohol consumption indicators were 12-months frequency of drinking, drinking quantity in grams of pure alcohol per day and 12-months frequency of episodic heavy drinking (EHD). Pearson correlation coefficients were calculated. Due to the limited availability of the AUDIT, the analyses could only be conducted for eight surveys.

Cluster analyses

In order to identify homogenous groups of surveys based on alcohol consumption indicators, hierarchical cluster analysis was performed. In hierarchical clustering, an algorithm is used that starts with each case in a separate cluster and combines clusters until only one is left. As the procedure for combining clusters, Ward's method was used, which computes the distance as the distance of all clusters to the grand average of the sample. The Squared Euclidian Distance was used for distance measuring. This measure increases the importance of large distances while weakening the importance of small distances. Since indicators with different scales and means were included in the analyses, all indicators were standardized to Z scores. The selection of the final number of clusters was based on the agglomeration schedule and the dendrogram.

Cluster analysis was based on four alcohol consumption indicators covering different drinking patterns: 12-months prevalence of abstinence, 12-months frequency of alcohol consumption, grams of pure ethanol per day and 12-months frequency of episodic heavy drinking. Due to missing information regarding these indicators in some datasets, only 18 out of 24 surveys could be included in the cluster analysis.

The Cluster analyses were stratified by gender since earlier studies showed partly different regional drinking patterns for males and females (Mäkelä et al., 2006).

B2 Results

B2.1 Sociodemographics

Characteristics of the weighted study sample by survey are shown in Table 2.1. Mean age ranged from 39.6 years in Poland to 41.9 years in Finland and Italy. For Wales and Northern Ireland, age was not available as a continuous but as a categorical variable only. The highest percentage of males was observed in Slovenia (51.4%), the lowest in Latvia (48.0%). The highest proportion of married people was indicated in Iceland (71.9%), the lowest in France (45.6%). Austria exhibited the highest percentage of divorced people (14.2%). The percentage of persons with low school education ranged from 8.6% (NO_12) to 72.3% (AT_08). Accordingly, Norway exhibited the highest (48.9%), and Austria the lowest proportion (8.7%) of highly educated people.

Table 2.1. Characteristics of the weighted study sample by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Age (years)	M	40.0	39.9	40.7	40.8	41.9	40.6	41.6	41.7	41.4	40.5	41.1	.
	CI	[39.6,40.4]	[39.1,40.7]	[40.0,41.3]	[40.5,41.0]	[41.3,42.4]	[40.1,41.0]	[41.1,42.0]	[41.6,41.7]	[41.3,41.4]	[40.2,40.9]	[40.6,41.5]	.
Sex (male)	%	50.6	50.5	51.1	50.8	50.5	48.0	50.4	50.4	50.3	49.8	49.1	49.7
	CI	[48.9,52.3]	[47.4,53.6]	[48.6,53.7]	[49.8,51.7]	[48.5,52.5]	[46.4,49.7]	[48.6,52.2]	[50.1,50.7]	[50.0,50.6]	[48.5,51.0]	[47.4,50.7]	[48.7,50.6]
Marital status													
Single	%	47.8	20.9	40.8	.	21.0	31.4	.	38.2	40.6	39.1	27.2	.
	CI	[46.1,49.5]	[18.0,24.2]	[38.3,43.3]	.	[19.4,22.7]	[30.0,32.9]	.	[37.9,38.4]	[40.3,40.9]	[37.8,40.4]	[25.7,28.8]	.
Married	%	47.5	71.9	50.6	.	68.9	49.2	.	55.6	53.6	50.5	64.9	.
	CI	[45.9,49.2]	[68.6,75.0]	[48.0,53.2]	.	[67,70.8]	[47.6,50.9]	.	[55.3,55.9]	[53.3,54.0]	[49.3,51.8]	[63.3,66.6]	.
Widowed	%	0.7	.	1.3	.	1.1	6.0	.	1.0	0.9	1.3	1.5	.
	CI	[0.5,0.9]	.	[0.8,2.0]	.	[0.8,1.7]	[5.3,6.8]	.	[1.0,1.1]	[0.9,1.0]	[1.1,1.6]	[1.1,1.9]	.
Divorced	%	4.0	7.2	7.4	.	9.0	13.4	.	5.2	4.9	9.1	6.4	.
	CI	[3.5,4.6]	[5.8,8.9]	[6.1,8.9]	.	[7.9,10.2]	[12.3,14.6]	.	[5.1,5.3]	[4.8,5.0]	[8.4,9.8]	[5.7,7.2]	.
School education													
Low	%	28.0	21.7	8.6	11.8	45.0	16.4	19.6	15.1	15.8	19.2	34.8	12.1
	CI	[26.5,29.7]	[18.9,24.8]	[7.2,10.1]	[11.2,12.4]	[43.0,47.0]	[15.3,17.6]	[18.2,21.1]	[14.9,15.3]	[15.6,16.1]	[18.2,20.2]	[33.2,36.4]	[11.5,12.8]
Medium	%	39.5	32.3	42.6	43.4	40.5	65.4	51.7	51.4	48.8	40.1	33.1	66.6
	CI	[37.8,41.2]	[29.4,35.4]	[40.0,45.1]	[42.4,44.3]	[38.6,42.5]	[63.8,66.9]	[49.8,53.5]	[51.1,51.7]	[48.5,49.1]	[38.8,41.3]	[31.5,34.7]	[65.7,67.5]
High	%	32.5	46.0	48.9	44.9	14.5	18.3	28.7	33.6	35.4	40.8	32.1	21.3
	CI	[30.9,34.1]	[42.8,49.2]	[46.3,51.5]	[43.9,45.8]	[13.2,16.0]	[17.0,19.6]	[27.1,30.5]	[33.3,33.8]	[35.1,35.7]	[39.5,42.0]	[30.6,33.7]	[20.5,22.1]

M = mean;% = percent; CI = 95% confidence interval; . = no data available

Table 2.1. cont.

		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Age (years)	M	.	41.4	41.3	42.0	41.1	40.7	39.6	40.7	41.5	41.4	41.9	41.4
	CI	.	[41.0,41.7]	[41.1,41.6]	[41.7,42.2]	[40.9,41.3]	[40.3,41.2]	[38.7,40.5]	[40.3,41.1]	[41.2,41.8]	[41.0,41.8]	[41.8,42.1]	[41.0,41.7]
Sex (male)	%	49.7	49.5	50.6	50.6	49.3	50.0	49.6	49.2	51.4	49.9	49.6	48.6
	CI	[47.9,51.6]	[48.1,51.0]	[49.4,51.8]	[49.5,51.7]	[48.7,50.0]	[47.9,52.1]	[46.1,53.0]	[47.6,50.8]	[50.2,52.6]	[48.4,51.4]	[49.0,50.1]	[47.2,50.1]
Marital status													
Single	%	36.2	33.7	35.0	35.6	42.4	37.2	30.4	32.1	39.7	31.2	36.5	28.4
	CI	[34.3,38.1]	[32.3,35.1]	[33.9,36.1]	[34.6,36.7]	[41.7,43.1]	[35.2,39.2]	[27.2,33.8]	[30.6,33.6]	[38.5,40.8]	[29.8,32.5]	[35.9,37.0]	[27.1,29.7]
Married	%	56.5	53.8	55.6	55.6	45.6	46.1	60.4	53.2	53.7	60.6	56.1	61.3
	CI	[54.6,58.4]	[52.4,55.3]	[54.5,56.8]	[54.5,56.6]	[44.9,46.2]	[42.9,48.2]	[57.0,63.8]	[51.6,54.8]	[52.6,54.9]	[59.2,62.1]	[55.6,56.7]	[59.9,62.7]
Widowed	%	1.9	2.1	1.7	1.5	2.6	2.5	4.2	4.3	2.5	4.0	2.2	3.0
	CI	[1.5,2.4]	[1.7,2.5]	[1.4,2.0]	[1.3,1.8]	[2.4,2.8]	[1.9,3.3]	[3.2,5.6]	[3.8,5.0]	[2.2,2.9]	[3.5,4.6]	[2.0,2.4]	[2.6,3.5]
Divorced	%	5.4	10.5	7.7	7.3	9.5	14.2	5.0	10.4	4.1	4.2	5.2	7.3
	CI	[4.7,6.3]	[9.7,11.4]	[7.1,8.4]	[6.7,7.9]	[9.1,9.9]	[12.7,15.9]	[3.7,6.6]	[9.5,11.4]	[3.7,4.6]	[3.7,4.9]	[5.0,5.5]	[6.6,8.1]
School education													
Low	%	.	23.3	10.3	10.4	45.3	72.3	45.0	18.3	26.4	31.9	41.7	56.4
	CI	.	[22.1,24.6]	[9.7,11.0]	[9.8,11.1]	[44.6,46.0]	[70.3,74.1]	[41.7,48.5]	[17.1,19.6]	[25.4,27.5]	[30.5,33.3]	[41.1,42.3]	[55.0,57.8]
Medium	%	.	34.9	53.3	60.3	34.1	19.0	37.6	62.2	58.8	53.4	43.0	26.6
	CI	.	[33.6,36.3]	[52.1,54.5]	[59.2,61.4]	[33.4,34.7]	[17.4,20.7]	[34.3,41.0]	[60.6,63.7]	[57.6,59.9]	[52.0,54.9]	[42.4,43.6]	[25.4,27.9]
High	%	.	41.8	36.4	29.3	20.7	8.7	17.4	19.5	14.8	14.7	15.3	17.0
	CI	.	[40.3,43.2]	[35.2,37.6]	[28.3,30.3]	[20.1,21.2]	[7.5,10.1]	[14.9,20.1]	[18.3,20.8]	[14.0,15.7]	[13.7,15.8]	[14.9,15.7]	[15.9,18.1]

M = mean;% = percent; CI = 95% confidence interval; . = no data available

B2.2 Alcohol consumption

Abstention

12-months prevalence of abstention (total population)

Figure 2.1 illustrates the 12-months prevalence of abstention by survey. An increasing tendency from Northern European countries towards Southern and Eastern Europe could be observed. Abstention rates ranged from 6.9% (DK_08) to 41.1% (PT_12).

Figure 2.1. 12-months prevalence of abstention by survey (total population)

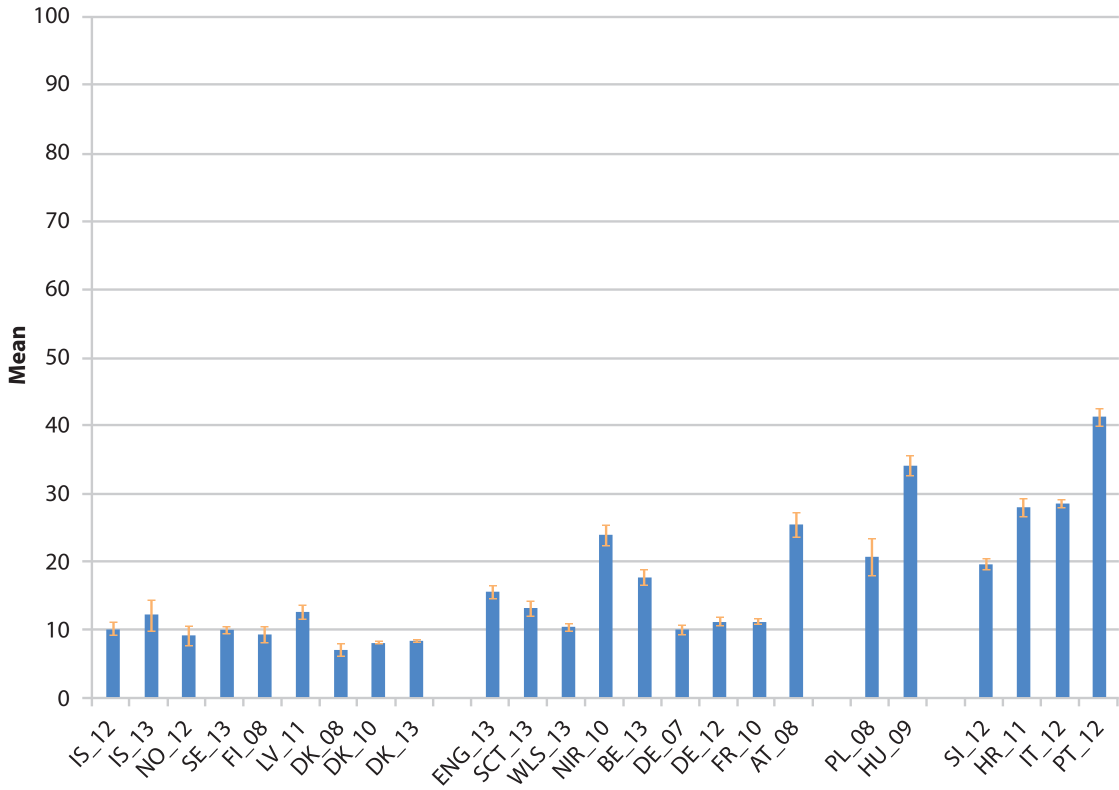


Table 2.2 displays the 12-months prevalence of abstention by gender and survey. Among males, abstention rates ranged from 5.3% (DK_08) to 26.2% (PT_12), while a broader range was observed among females, from 8.6% (DK_08) to 55.2% (PT_12). In all surveys except IS_13, gender ratios were smaller than 1.0 implying higher abstention rates among females as compared to males. In general, gender differences tended to be greater in Southern and Eastern as compared to Northern and Central European countries. Greatest gender differences were observed for IT_12 (gender ratio = 0.4), while no gender differences were found for IS_13 (gender ratio = 1.0).

Table 2.2. 12-months prevalence of abstention by gender and survey (total population)

	Males (%)	Females (%)	Gender Ratio
IS_12	9.1	10.9	0.8
IS_13	12.2	12.0	1.0
NO_12	6.7	11.6	0.6
SE_13	8.3	11.2	0.7
FI_08	8.5	9.8	0.9
LV_11	10.4	14.4	0.7
DK_08	5.3	8.6	0.6
DK_10	5.6	10.4	0.5
DK_13	5.9	10.6	0.6
ENG_13	13.6	17.3	0.8
SCT_13	11.1	15.0	0.7
WLS_13	8.8	11.6	0.8
NIR_10	21.8	25.7	0.9
BE_13	13.8	21.3	0.6
DE_09	8.1	11.8	0.7
DE_12	9.9	12.4	0.8
FR_10	8.2	13.9	0.6
AT_08	21.7	29.0	0.7
PL_08	13.6	27.7	0.5
HU_09	22.2	45.4	0.5
SI_12	15.4	24.0	0.6
HR_11	18.2	37.5	0.5
IT_12	14.7	42.0	0.4
PT_12	26.2	55.2	0.5

% = percent

With the exception of Iceland and Finland, males had decreased likelihood of being abstinent in all surveys (Table 2.3). The effects tended to be stronger in Eastern and Southern as compared to Northern and Central European countries. The odds on being abstinent increased with age in most surveys, while in some exceptions the odds decreased with age (SE_13, ENG_13, WLS_13, BE_13, FR_10). With the exception of Latvia, people of low socioeconomic status (SES) had increased odds on being abstinent in all surveys.

Table 2.3. Gender, age, and SES relations with 12-months prevalence of abstention by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	OR	0.8	0.9	0.5*	0.7*	0.8	0.7*	0.6*	0.5*	0.5*	0.7*	0.7*	0.7*
	CI	[0.7,1.0]	[0.6,1.5]	[0.3,0.7]	[0.6,0.8]	[0.6,1.1]	[0.6,0.8]	[0.4,0.8]	[0.5,0.5]	[0.5,0.5]	[0.6,0.8]	[0.6,0.8]	[0.6,0.8]
Age (Ref. 18-29 years)													
30-49 years	OR	1.4	0.8	1.5	0.8*	1.0	0.9	1.1	1.5*	1.6*	0.8*	1.0	0.8*
	CI	[0.9,2.0]	[0.4,1.4]	[1.0,2.4]	[0.7,1.0]	[0.7,1.6]	[0.7,1.2]	[0.8,1.7]	[1.4,1.7]	[1.5,1.8]	[0.7,1.0]	[0.7,1.3]	[0.6,0.9]
50-64 years	OR	1.8*	1.0	1.5	0.8*	1.6*	1.6*	0.9	1.5*	1.5*	0.5*	1.1	0.8*
	CI	[1.3,2.5]	[0.5,1.9]	[0.9,2.4]	[0.7,0.9]	[1.1,2.4]	[1.2,2.0]	[0.6,1.4]	[1.4,1.6]	[1.4,1.7]	[0.4,0.7]	[0.8,1.5]	[0.7,1.0]
SES (Ref. High)													
Intermediate	OR	1.1	1.4	1.5	1.4*	1.0	1.1	1.4	1.6*	1.6*	0.8*	0.8	1.7*
	CI	[0.9,1.5]	[0.8,2.3]	[1.0,2.2]	[1.2,1.7]	[0.6,1.7]	[0.8,1.4]	[0.9,2.1]	[1.5,1.7]	[1.5,1.7]	[0.7,1.0]	[0.6,1.1]	[1.4,2.0]
Low	OR	1.5*	2.0*	2.1*	3.3*	1.8*	1.3	4.1*	3.3*	3.2*	2.6*	1.8*	4.6*
	CI	[1.1,2.0]	[1.1,3.6]	[1.2,3.8]	[2.7,3.9]	[1.2,2.9]	[0.9,1.8]	[2.6,6.5]	[3.1,3.6]	[2.9,3.5]	[2.2,3.1]	[1.5,2.3]	[3.6,5.9]

		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	OR	0.8*	0.5*	0.7*	0.8*	0.5*	0.7*	0.4*	0.3*	0.5*	0.3*	0.2*	0.3*
	CI	[0.7,1.0]	[0.5,0.6]	[0.6,0.9]	[0.7,0.9]	[0.5,0.6]	[0.6,0.8]	[0.3,0.6]	[0.3,0.4]	[0.5,0.6]	[0.3,0.4]	[0.2,0.2]	[0.3,0.3]
Age (Ref. 18-29 years)													
30-49 years	OR	1.3*	1.0	1.7*	1.7*	0.7*	1.1	1.1	1.1	1.4*	1.9*	1.0	1.1
	CI	[1.1,1.7]	[0.8,1.3]	[1.4,2.1]	[1.4,2.1]	[0.6,0.8]	[0.9,1.4]	[0.7,1.8]	[0.9,1.3]	[1.2,1.6]	[1.6,2.3]	[0.9,1.1]	[0.9,1.3]
50-64 years	OR	1.9*	0.6*	1.9*	1.9*	0.5*	1.3*	2.0*	1.1	1.7*	2.9*	1.0	1.2
	CI	[1.5,2.4]	[0.5,0.8]	[1.5,2.3]	[1.6,2.3]	[0.4,0.5]	[1.0,1.7]	[1.3,3.2]	[0.9,1.4]	[1.4,2.0]	[2.4,3.5]	[0.9,1.1]	[1.0,1.4]
SES (Ref. High)													
Intermediate	OR	.	1.8*	1.9*	1.2*	1.2*	1.0	1.4	1.7*	1.5*	1.7*	1.3*	1.3*
	CI	.	[1.5,2.2]	[1.5,2.3]	[1.0,1.5]	[1.0,1.3]	[0.6,1.6]	[0.8,2.5]	[1.4,2.1]	[1.2,1.8]	[1.4,2.2]	[1.2,1.4]	[1.0,1.6]
Low	OR	.	4.6*	4.3*	2.7*	2.1*	1.7*	2.1*	2.8*	3.2*	2.5*	2.0*	1.5*
	CI	.	[3.7,5.7]	[3.3,5.7]	[2.2,3.5]	[1.8,2.3]	[1.1,2.6]	[1.2,3.5]	[2.2,3.5]	[2.5,3.9]	[1.9,3.2]	[1.8,2.2]	[1.3,1.8]

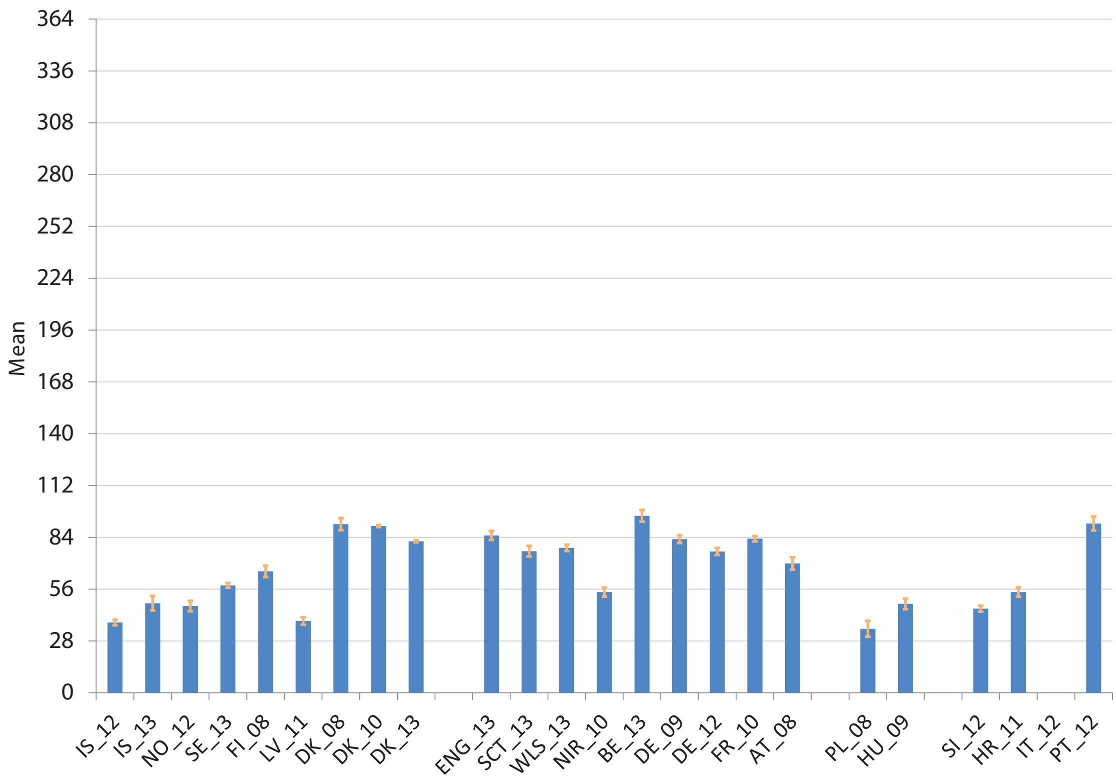
OR = odds ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

Frequency of drinking

12-months frequency of alcohol drinking (total population)

Figure 2.2 displays the average number of alcohol drinking days in the past 12 months by survey. Belgium (95.6 days), Portugal (91.4 days), and Denmark (91.1 days) exhibited the highest frequency, whereas the lowest values were observed in Poland (34.6 days), Iceland (38.0 days), and Latvia (38.8 days).

Figure 2.2. 12-months frequency of alcohol drinking by survey (days per year, total population)



The 12-months frequency of drinking ranged from 45.6 days (IS_12) to 150.3 days (PT_12) among males, while a smaller range from 18.0 days (HU_09) to 73.5 days (BE_13) was observed among women (Table 2.4). Gender ratios exceeding 1.0 indicated higher frequency among males in all surveys. Gender ratios ranged from 1.3 in Norway to 4.2 in Portugal. Eastern and Southern European countries exhibited greater gender ratios as compared to Northern and Central European countries.

Table 2.4. 12-months frequency of alcohol drinking by gender and survey (days per year, total population)

	Males (M)	Females (M)	Gender Ratio
IS_12	45.6	30.2	1.5
IS_13	61.3	35.2	1.7
NO_12	53.0	40.5	1.3
SE_13	67.2	48.6	1.4

	Males (M)	Females (M)	Gender Ratio
FI_08	84.7	46.2	1.8
LV_11	58.5	20.5	2.9
DK_08	110.6	71.3	1.6
DK_10	107.3	72.5	1.5
DK_13	97.5	66.1	1.5
ENG_13	100.2	69.9	1.4
SCT_13	90.1	63.5	1.4
WLS_13	92.4	64.4	1.4
NIR_10	64.1	44.8	1.4
BE_13	118.1	73.5	1.6
DE_09	104.6	61.0	1.7
DE_12	95.5	56.7	1.7
FR_10	113.4	53.8	2.1
AT_08	89.8	49.9	1.8
PL_08	51.9	17.6	3.0
HU_09	79.2	18.0	4.4
SI_12	62.8	27.2	2.3
HR_11	82.1	26.8	3.1
IT_12	.	.	.
PT_12	150.3	35.6	4.2

M = mean; . = no data available

Gender, age, and SES effects on 12-months frequency of drinking by survey are shown in Table 2.5. Males had increased odds on drinking more frequently in all surveys. The effect tended to be stronger in Eastern and Southern as compared to Northern and Central European countries. The average number of drinking days in the past 12 months was positively associated with age in all surveys, i.e. the older age group had higher odds on more frequent drinking. The only exception was Latvia where the odds decreased with age. The odds on more frequent drinking were lowest among the low SES group in all surveys except Latvia, Poland, and Portugal, where SES had no significant effect on the drinking frequency.

Table 2.5. Gender, age, and SES relations with 12-months frequency of alcohol drinking by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	1.5*	1.9*	1.4*	1.4*	1.9*	2.9*	1.6*	1.5*	1.5*	1.5*	1.5*	1.5*
	CI	[1.4,1.7]	[1.6,2.2]	[1.2,1.5]	[1.4,1.5]	[1.7,2.1]	[2.6,3.2]	[1.5,1.8]	[1.5,1.6]	[1.5,1.6]	[1.4,1.6]	[1.4,1.6]	[1.4,1.5]
Age (Ref. 18-29 years)													
30-49 years	IRR	1.0	1.3*	1.0	1.3*	1.3*	1.0	1.2*	1.5*	1.4*	1.5*	1.4*	1.7*
	CI	[0.9,1.2]	[1.0,1.6]	[0.8,1.1]	[1.2,1.4]	[1.2,1.5]	[0.9,1.2]	[1.1,1.4]	[1.4,1.5]	[1.4,1.5]	[1.4,1.6]	[1.3,1.6]	[1.6,1.8]
50-64 years	IRR	1.4*	1.5*	1.5*	2.0*	1.4*	0.8*	1.8*	2.5*	2.4*	2.1*	1.7*	2.0*
	CI	[1.2,1.6]	[1.2,1.9]	[1.3,1.7]	[1.8,2.1]	[1.3,1.6]	[0.7,0.9]	[1.7,2.0]	[2.5,2.5]	[2.4,2.5]	[1.9,2.3]	[1.6,2.0]	[1.9,2.2]
SES (Ref. High)													
Intermediate	IRR	0.8*	0.6*	0.8*	0.8*	0.9	0.9	0.9*	0.9*	0.9*	0.9*	0.8*	0.8*
	CI	[0.8,0.9]	[0.5,0.8]	[0.7,0.9]	[0.8,0.9]	[0.8,1.1]	[0.8,1.1]	[0.8,1.0]	[0.9,0.9]	[0.9,0.9]	[0.9,1.0]	[0.8,0.9]	[0.8,0.9]
Low	IRR	0.7*	0.6*	0.7*	0.6*	0.8*	1.2	0.7*	0.8*	0.8*	0.7*	0.7*	0.6*
	CI	[0.6,0.8]	[0.5,0.7]	[0.6,0.9]	[0.6,0.7]	[0.7,0.9]	[1.0,1.4]	[0.7,0.8]	[0.8,0.8]	[0.8,0.8]	[0.6,0.7]	[0.6,0.7]	[0.6,0.7]

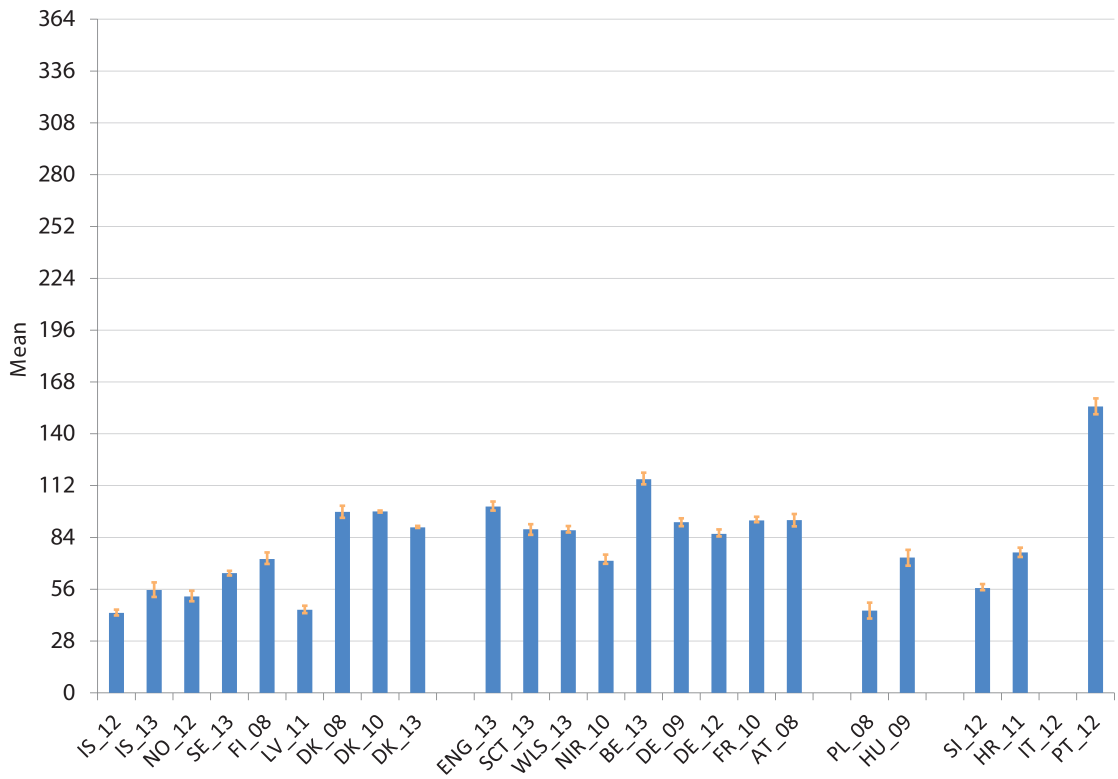
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	1.5*	1.7*	1.7*	1.7*	2.2*	1.9*	3.0*	4.3*	2.4*	3.2*	.	4.1*
	CI	[1.3,1.6]	[1.6,1.8]	[1.6,1.8]	[1.6,1.8]	[2.1,2.3]	[1.6,2.1]	[2.3,3.9]	[3.7,4.9]	[2.2,2.6]	[2.9,3.6]	.	[3.7,4.5]
Age (Ref. 18-29 years)													
30-49 years	IRR	1.2*	1.3*	1.2*	1.2*	1.3*	1.1*	1.0	1.3*	1.0	1.0	.	1.9*
	CI	[1.1,1.4]	[1.2,1.5]	[1.1,1.3]	[1.1,1.3]	[1.2,1.3]	[1.0,1.3]	[0.8,1.4]	[1.1,1.6]	[0.9,1.1]	[0.9,1.2]	.	[1.6,2.2]
50-64 years	IRR	1.3*	2.0*	1.5*	1.5*	2.2*	1.3*	1.2	1.9*	1.3*	1.3*	.	2.4*
	CI	[1.1,1.5]	[1.8,2.2]	[1.4,1.6]	[1.4,1.6]	[2.1,2.3]	[1.1,1.5]	[0.7,1.5]	[1.6,2.3]	[1.2,1.5]	[1.1,1.5]	.	[2.1,2.8]
SES (Ref. High)													
Intermediate	IRR	.	0.8*	0.8*	1.0	0.9*	0.8	1.0	0.9	0.8*	0.7*	.	0.9
	CI	.	[0.7,0.8]	[0.8,0.9]	[0.9,1.0]	[0.8,0.9]	[0.7,1.0]	[0.7,1.4]	[0.7,1.0]	[0.7,0.9]	[0.6,0.8]	.	[0.8,1.1]
Low	IRR	.	0.6*	0.6*	0.7*	0.9*	0.7*	1.0	0.8*	0.7*	0.7*	.	1.1
	CI	.	[0.5,0.6]	[0.5,0.6]	[0.6,0.8]	[0.8,0.9]	[0.5,0.8]	[0.7,1.4]	[0.6,1.0]	[0.6,0.8]	[0.6,0.8]	.	[0.9,1.3]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

12-months frequency of alcohol drinking (drinkers only)

Figure 2.3 shows the average number of alcohol drinking days among drinkers in the past 12 months by survey. Portugal (155.7 days), Belgium (116.0 days), and England (101.0 days) exhibited the highest frequency. The lowest values were observed in Iceland (42.2 days), Poland (43.6 days), and Latvia (44.3 days).

Figure 2.3. 12-months frequency of alcohol drinking by survey (days per year, drinkers only)



The 12-months frequency of drinking among drinkers ranged from 50.2 days (IS_12) to 203.9 days (PT_12) among males, while a smaller range from 23.9 days (LV_11) to 93.4 days (BE_13) was observed among women (Table 2.6). Gender ratios exceeding 1.0 implied higher frequency among males in all surveys and ranged from 1.2 in Norway to 3.1 in Hungary. Eastern and Southern European countries exhibited greater gender ratios as compared to Northern and Central European countries.

Table 2.6. 12-months frequency of alcohol drinking by gender and survey (days per year, drinkers only)

	Males (M)	Females (M)	Gender Ratio
IS_12	50.2	33.9	1.5
IS_13	69.8	40.0	1.7
NO_12	56.8	45.8	1.2
SE_13	73.3	54.8	1.3

	Males (M)	Females (M)	Gender Ratio
FI_08	92.6	51.3	1.8
LV_11	65.2	23.9	2.7
DK_08	116.8	78.0	1.5
DK_10	113.7	81.1	1.4
DK_13	103.7	74.0	1.4
ENG_13	116.5	84.9	1.4
SCT_13	101.3	74.6	1.4
WLS_13	102.4	73.5	1.4
NIR_10	82.0	60.3	1.4
BE_13	137.0	93.4	1.5
DE_09	113.9	69.2	1.7
DE_12	106.0	64.8	1.6
FR_10	123.5	62.5	2.0
AT_08	114.5	70.5	1.6
PL_08	60.1	24.3	2.5
HU_09	101.7	32.9	3.1
SI_12	74.2	35.7	2.1
HR_11	100.3	43.0	2.3
IT_12	.	.	.
PT_12	203.9	80.0	2.6

M = mean; . = no data available

Table 2.7 shows gender, age, and SES effects on the 12-months frequency of drinking by survey. Male drinkers had increased likelihood of drinking more frequently in all surveys. The effect tended to be stronger in Eastern and Southern as compared to Northern and Central European countries. With the exception of Latvia, the average number of drinking days in past 12 months was positively associated with age in all surveys, i.e. the older age group had a higher the odds on a more frequent drinking. The odds on more frequent drinking were decreased among the low SES group in most surveys. However, in two cases (Latvia, Portugal) the odds were increased among the low SES group.

Table 2.7. Gender, age, and SES relations with 12-months frequency of alcohol drinking by survey (drinkers only)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	1.5*	1.9*	1.3*	1.4*	1.8*	2.7*	1.6*	1.5*	1.5*	1.4*	1.4*	1.4*
	CI	[1.4,1.7]	[1.6,2.2]	[1.1,1.4]	[1.3,1.5]	[1.7,2.0]	[2.4,3.0]	[1.5,1.7]	[1.4,1.5]	[1.4,1.5]	[1.3,1.5]	[1.3,1.5]	[1.4,1.5]
Age (Ref. 18-29 years)													
30-49 years	IRR	1.1	1.2*	1.0	1.3*	1.3*	1.0	1.3*	1.5*	1.5*	1.4*	1.4*	1.6*
	CI	[0.9,1.2]	[1.0,1.5]	[0.9,1.2]	[1.2,1.4]	[1.2,1.5]	[0.9,1.2]	[1.2,1.4]	[1.5,1.5]	[1.4,1.5]	[1.3,1.5]	[1.3,1.5]	[1.5,1.7]
50-64 years	IRR	1.5*	1.5*	1.5*	1.9*	1.5*	0.8*	1.8*	2.6*	2.5*	1.9*	1.8*	2.0*
	CI	[1.3,1.7]	[1.2,1.8]	[1.3,1.8]	[1.8,2.0]	[1.4,1.7]	[0.7,0.9]	[1.7,2.0]	[2.5,2.6]	[2.5,2.6]	[1.8,2.1]	[1.6,2.0]	[1.9,2.1]
SES (Ref. High)													
Intermediate	IRR	0.9*	0.7*	0.8*	0.8*	0.9	0.9	0.9*	0.9*	0.9*	0.9*	0.8*	0.9*
	CI	[0.8,0.9]	[0.6,0.8]	[0.7,0.9]	[0.8,0.9]	[0.8,1.1]	[0.8,1.1]	[0.8,1.0]	[0.9,0.9]	[0.9,0.9]	[0.9,1,0]	[0.7,0.9]	[0.8,0.9]
Low	IRR	0.7*	0.6*	0.8	0.7*	0.9*	1.2*	0.8*	0.9*	0.9*	0.8*	0.7*	0.7*
	CI	[0.6,0.8]	[0.5,0.8]	[0.6,1.0]	[0.7,0.8]	[0.8,1.0]	[1.0,1.4]	[0.7,0.9]	[0.9,0.9]	[0.8,0.9]	[0.7,0.9]	[0.7,0.8]	[0.7,0.8]

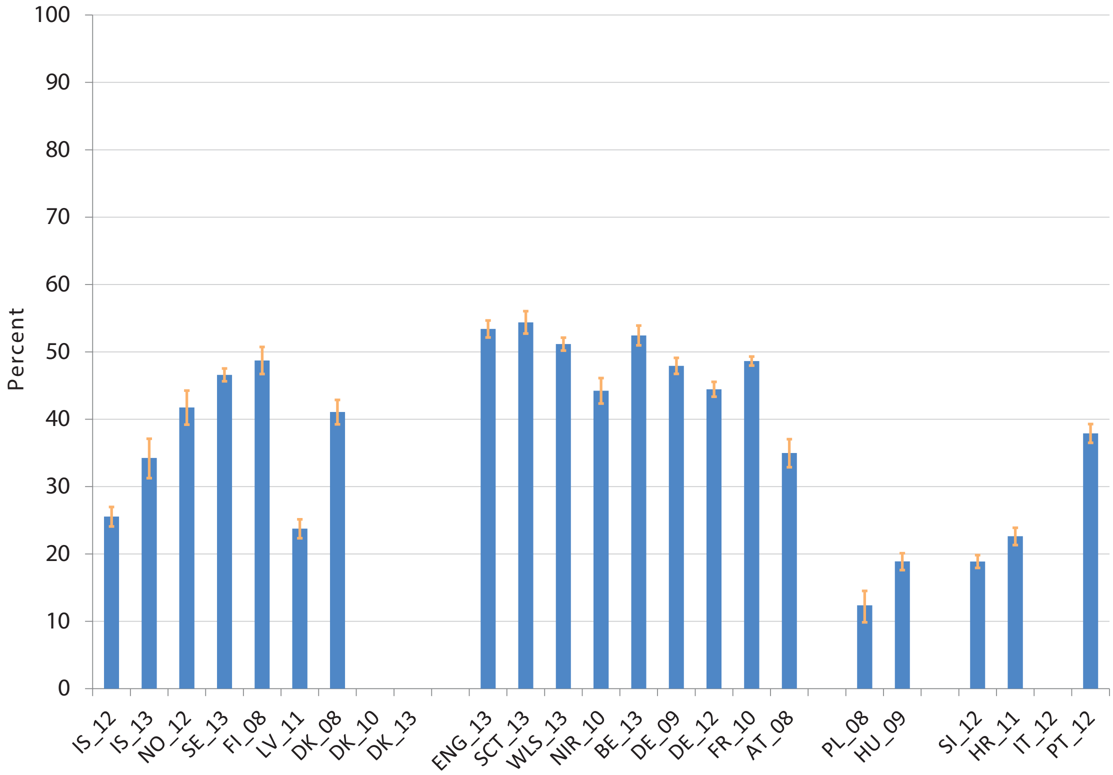
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	1.4*	1.5*	1.6*	1.6*	2.0*	1.7*	2.4*	2.9*	2.1*	2.4*	.	2.4*
	CI	[1.3,1.5]	[1.4,1.6]	[1.5,1.7]	[1.6,1.7]	[1.9,2.1]	[1.5,1.9]	[1.9,3.1]	[2.6,3.3]	[1.9,2.2]	[2.2,2.6]	.	[2.2,2.6]
Age (Ref. 18-29 years)												.	
30-49 years	IRR	1.3*	1.4*	1.3*	1.3*	1.2*	1.2*	1.0	1.4*	1.7	1.2*	.	1.9*
	CI	[1.1,1.4]	[1.2,1.5]	[1.2,1.4]	[1.2,1.4]	[1.2,1.3]	[1.1,1.3]	[0.8,1.4]	[1.2,1.7]	[1.0,1.2]	[1.1,1.3]	.	[1.7,2.2]
50-64 years	IRR	1.5*	1.9*	1.6*	1.6*	2.0*	1.4*	1.2	2.1*	1.5*	1.7*	.	2.6*
	CI	[1.3,1.7]	[1.7,2.0]	[1.5,1.7]	[1.5,1.7]	[1.9,2.1]	[1.2,1.6]	[0.9,1.7]	[1.8,2.5]	[1.4,1.7]	[1.5,1.9]	.	[2.3,2.9]
SES (Ref. High)		.										.	
Intermediate	IRR	.	0.8*	0.8*	1.0	0.9*	0.8*	1.1	1.0	0.8*	0.9*	.	1.0
	CI	.	[0.8,0.9]	[0.8,0.9]	[0.9,1.0]	[0.9,0.9]	[0.7,1.0]	[0.8,1.5]	[0.9,1.2]	[0.8,0.9]	[0.8,1.0]	.	[0.9,1.2]
Low	IRR	.	0.8*	0.7*	0.8*	0.9*	0.7*	1.2	1.2	0.9*	0.9	.	1.4*
	CI	.	[0.7,0.9]	[0.6,0.7]	[0.7,0.9]	[0.9,1.0]	[0.6,0.9]	[0.8,1.7]	[0.9,1.4]	[0.8,1.0]	[0.8,1.0]	.	[1.2,1.5]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

12-months prevalence of weekly alcohol drinking (total population)

Figure 2.4 illustrates the 12-months prevalence of weekly drinking by survey. In 12 surveys, more than 40% of the total sample drank alcohol at least once a week in the past 12 months. The highest prevalences were observed for Scotland (54.4%), England (53.4%), and Belgium (52.4%), the lowest for Poland (12.4%), Slovenia (18.9%), and Hungary (18.9%). There was a tendency toward a lower weekly drinking prevalence in Eastern and Southern as compared to Central European countries.

Figure 2.4. 12-months prevalence of weekly drinking by survey (total population)



The 12-months prevalence of weekly drinking among males ranged between 20.3% in Poland and 63.3% in France (Table 2.8). Among females, the range was between 4.6% in Poland and 47.2% in Scotland. Without exception, gender ratios exceeded 1.0 implying higher rates among males. Differences tended to be greater in Southern and Central as compared to Eastern and Northern European countries. The greatest gender differences were observed for HU_09 (gender ratio = 5.4), the smallest for NO_12, ENG_13, SCT_13, WLS_13, and NIR_10 (gender ratio = 1.3).

Table 2.8. 12-months prevalence of weekly drinking by gender and survey (total population)

	Males (%)	Females (%)	Gender Ratio
IS_12	31.7	19.2	1.7
IS_13	42.3	26.0	1.6
NO_12	47.4	35.8	1.3

	Males (%)	Females (%)	Gender Ratio
SE_13	53.5	39.5	1.4
FI_08	60.7	36.5	1.7
LV_11	37.0	11.5	3.2
DK_08	51.9	30.1	1.7
DK_10	.	.	.
DK_13	.	.	.
ENG_13	60.3	46.6	1.3
SCT_13	61.8	47.2	1.3
WLS_13	58.7	43.7	1.3
NIR_10	50.6	38.0	1.3
BE_13	63.3	41.8	1.5
DE_09	58.1	37.5	1.6
DE_12	54.5	34.1	1.6
FR_10	63.3	34.3	1.8
AT_08	44.0	26.0	1.7
PL_08	20.3	4.6	4.5
HU_09	32.2	6.0	5.4
SI_12	28.2	9.1	3.1
HR_11	35.6	9.7	3.7
IT_12	.	.	.
PT_12	59.0	17.9	3.3

% = percent; . = no data available

In all surveys, being male increased the likelihood of being a weekly drinker (Table 2.9). The strongest effects were found for Eastern and Southern Europe as well as for Latvia. In most surveys, the likelihood for weekly drinking increased with age. However, in the case of Latvia there was a lower risk in the oldest age group. No age effect was found for NIR_10, AT_08, and PL_08. With the exception of LV_11, PL_08, HU_09, and PT_08, low SES was associated with a lower risk for of drinking at least once a week.

Table 2.9. Gender, age, and SES effects on 12-months prevalence of weekly drinking by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	OR	2.0*	2.4*	1.7*	2.0*	2.9*	4.4*	2.8*	.	.	1.8*	1.9*	1.9*
	CI	[1.7,2.4]	[1.8,3.1]	[1.4,2.1]	[1.8,2.1]	[2.4,3.4]	[3.7,5.2]	[2.4,3.3]	.	.	[1.6,2.0]	[1.6,2.1]	[1.8,2.1]
Age (Ref. 18-29 years)													
30-49 years	OR	1.2	1.2	1.2	1.6*	1.5*	1.1	1.4*	.	.	1.5*	1.4*	1.9*
	CI	[0.9,1.5]	[0.8,1.8]	[0.9,1.5]	[1.5,1.8]	[1.2,1.9]	[0.8,1.2]	[1.1,1.7]	.	.	[1.3,1.7]	[1.1,1.7]	[1.7,2.1]
50-64 years	OR	2.0*	1.8*	2.3*	2.9*	1.5*	0.7*	3.0*	.	.	2.2*	1.7*	2.3*
	CI	[1.6,2.6]	[1.2,2.7]	[1.7,3.0]	[2.6,3.2]	[1.2,2.0]	[0.6,0.8]	[2.4,3.8]	.	.	[1.9,2.6]	[1.4,2.1]	[2.1,2.6]
SES (Ref. High)													
Intermediate	OR	0.8*	0.4*	0.6*	0.7*	0.7*	1.0	0.6*	.	.	0.9*	0.8*	0.7*
	CI	[0.6,0.9]	[0.3,0.6]	[0.5,0.7]	[0.6,0.8]	[0.6,0.9]	[0.8,1.3]	[0.5,0.8]	.	.	[0.8,1.0]	[0.7,0.9]	[0.6,0.7]
Low	OR	0.5*	0.3*	0.5*	0.4*	0.5*	1.3*	0.4*	.	.	0.4*	0.5*	0.4*
	CI	[0.4,0.6]	[0.2,0.5]	[0.3,0.8]	[0.4,0.5]	[0.4,0.7]	[1.0,1.8]	[0.3,0.6]	.	.	[0.4,0.5]	[0.4,0.5]	[0.3,0.4]

		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	OR	1.7*	2.6*	2.2*	2.4*	3.5*	2.3*	5.2*	8.2*	4.1*	5.3*	.	6.9*
	CI	[1.4,2.0]	[2.3,3.0]	[2.0,2.4]	[2.2,2.6]	[3.3,3.7]	[1.9,2.8]	[3.1,8.7]	[6.6,10.1]	[3.6,4.7]	[4.5,6.3]	.	[6.0,7.8]
Age (Ref. 18-29 years)													
30-49 years	OR	1.0	1.2*	1.1	1.1	1.3*	1.0	1.2	1.9*	1.1	1.2	.	1.6*
	CI	[0.9,1.3]	[1.0,1.5]	[1.0,1.2]	[1.0,1.2]	[1.2,1.4]	[0.9,1.3]	[0.7,2.2]	[1.4,2.5]	[0.9,1.3]	[1.0,1.4]	.	[1.3,2.0]
50-64 years	OR	1.0	2.0*	1.2*	1.2*	2.5*	1.1	1.4	3.4*	1.8*	1.5*	.	1.9*
	CI	[0.8,1.3]	[1.7,2.4]	[1.1,1.4]	[1.1,1.4]	[2.4,2.8]	[0.9,1.4]	[0.7,2.5]	[2.6,4.4]	[1.5,2.2]	[1.2,1.9]	.	[1.5,2.3]
SES (Ref. High)													
Intermediate	OR	.	0.6*	0.6*	0.9	0.8*	0.6*	1.1	0.9	0.8*	0.7*	.	0.9
	CI	.	[0.7,0.8]	[0.5,0.7]	[0.9,1.1]	[0.7,0.8]	[0.4,0.9]	[0.6,2.4]	[0.7,1.2]	[0.7,0.9]	[0.6,0.9]	.	[0.7,1.1]
Low	OR	.	0.4*	0.4*	0.9*	0.6*	0.4*	1.4	0.8	0.7*	0.7*	.	1.0
	CI	.	[0.3,0.5]	[0.3,0.4]	[0.4,0.6]	[0.6,0.7]	[0.3,0.6]	[0.7,2.8]	[0.6,1.1]	[0.5,0.8]	[0.5,0.9]	.	[0.9,1.3]

OR = odds ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

12-months frequency of beer drinking (total population)

The average number of beer drinking days in the past 12 months by survey is illustrated in Figure 2.5. The highest beer drinking frequency was found for Denmark (71.6 days), followed by Hungary (57.5 days) and Germany (53.1/48.1 days), while the lowest values could be observed in Slovenia (24.3 days), Norway (27.5 days), and Northern Ireland (29.4 days).

Figure 2.5. 12-months frequency of beer drinking by survey (days per year, total population)

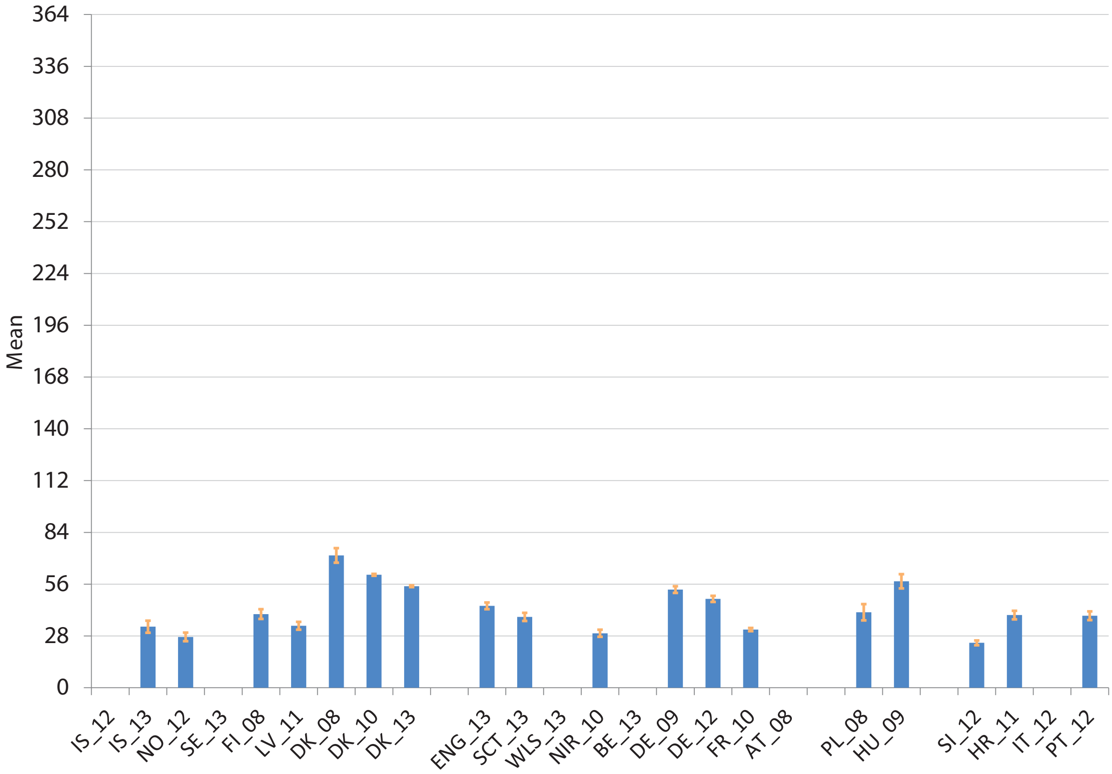


Table 2.10 shows the average number of beer drinking days in the past 12 months by gender and survey. Among males, the 12-months frequency of beer drinking ranged from 37.8 days (SI_12) to 110.4 days (DK_08). Among women, a range from 8.0 days (PT_12) to 32.6 days (DK_08) was observed. Gender ratios exceeded 1.0 in all surveys, and ranged from 2.6 in Iceland to 9.0 in Portugal. Differences between males and females tended to increase from Northern to Eastern and Southern countries.

Table 2.10. 12-months frequency of beer drinking by gender and survey (days per year, total population)

	Males (M)	Females (M)	Gender Ratio
IS_12	.	.	.
IS_13	47.3	18.4	2.6
NO_12	40.8	13.6	3.0
SE_13	.	.	.

	Males (M)	Females (M)	Gender Ratio
FI_08	61.5	17.7	3.5
LV_11	58.8	10.2	5.8
DK_08	110.4	32.6	3.4
DK_10	93.3	28.3	3.3
DK_13	82.3	27.2	3.0
ENG_13	70.7	18.1	3.9
SCT_13	64.8	12.8	5.1
WLS_13	.	.	.
NIR_10	49.4	9.7	5.1
BE_13	.	.	.
DE_09	82.5	22.9	3.6
DE_12	76.0	19.3	3.9
FR_10	51.3	12.2	4.2
AT_08	.	.	.
PL_08	65.4	16.7	3.9
HU_09	96.1	14.8	6.5
SI_12	37.8	10.0	3.8
HR_11	65.1	13.6	4.8
IT_12	.	.	.
PT_12	71.7	8.0	9.0

M = mean; . = no data available

Being male strongly increased the odds on for drinking beer more frequently in all surveys, with a maximum effect of IRR = 9.8 in Portugal (Table 2.11). No clear pattern could be observed with regards to age effects. In some surveys, the frequency of beer drinking increased with age (FI_08, DK_10, DK_13, ENG_13, DE_09, DE_12, HU_09), while an inverse effect was observed in other cases (LV_11, NIR_10, FR_10, SI_12, HR_11, PT_12). The likelihood of drinking beer more frequently was lowest among low SES groups in Iceland, Germany, and France, while the same group had a higher risk in Latvia and Denmark.

Table 2.11. Gender, age, and SES relations with 12-months frequency of beer drinking by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	.	2.7*	3.2*	.	3.6*	5.5*	3.4*	3.3*	3.0*	3.9*	5.2*	.
	CI	.	[2.3,3.4]	[2.7,3.9]	.	[3.1,4.1]	[4.7,6.5]	[3.0,3.9]	[3.2,3.3]	[3.0,3.1]	[3.6,4.3]	[4.5,6.0]	.
Age (Ref. 18-29 years)													
30-49 years	IRR	.	1.1	0.6*	.	1.4*	1.0	0.8*	0.8*	0.8*	1.1	1.0	.
	CI	.	[0.9,1.4]	[0.5,0.8]	.	[1.2,1.7]	[0.8,1.2]	[0.7,1.0]	[0.8,0.9]	[0.8,0.8]	[1.0,1.2]	[0.9,1.2]	.
50-64 years	IRR	.	1.1	0.9	.	1.5*	0.6*	1.0	1.2*	1.0*	1.2*	0.9	.
	CI	.	[0.8,1.4]	[0.7,1.1]	.	[1.3,1.8]	[0.5,0.8]	[0.9,1.2]	[1.1,1.2]	[1.0,1.1]	[1.0,1.3]	[0.7,1.1]	.
SES (Ref. High)													
Intermediate	IRR	.	0.7*	0.9	.	1.2	1.3*	1.0	1.1*	1.1*	1.1	0.9	.
	CI	.	[0.5,0.8]	[0.7,1.0]	.	[1.0,1.4]	[1.0,1.7]	[0.9,1.2]	[1.1,1.2]	[1.1,1.1]	[1.0,1.2]	[0.8,1.1]	.
Low	IRR	.	0.6*	0.8	.	1.1	2.1*	1.2	1.2*	1.2*	1.0	0.9	.
	CI	.	[0.5,0.8]	[0.5,1.1]	.	[0.9,1.4]	[1.5,2.8]	[1.0,1.5]	[1.2,1.3]	[1.1,1.2]	[0.9,1.1]	[0.8,1.1]	.

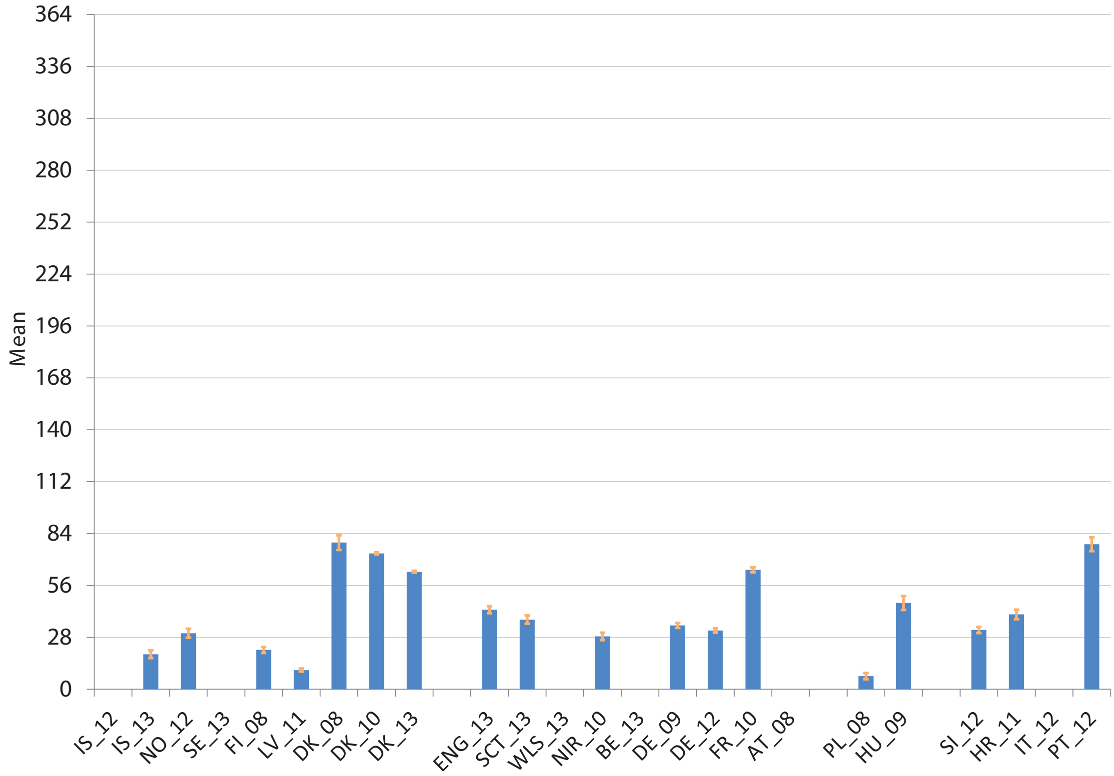
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	5.3*	.	3.6*	3.9*	4.3*	.	3.8*	6.6*	3.8*	5.0*	.	9.8*
	CI	[4.5,6.3]	.	[3.3,3.9]	[3.6,4.3]	[4.0,4.6]	.	[2.9,4.9]	[5.5,7.9]	[3.4,4.3]	[4.3,5.8]	.	[8.2,11.7]
Age (Ref. 18-29 years)													
30-49 years	IRR	0.9	.	1.1	1.1	0.8*	.	1.0	1.4*	0.9*	0.7*	.	1.0
	CI	[0.8,1.1]	.	[1.0,1.2]	[1.0,1.2]	[0.7,0.8]	.	[0.7,1.5]	[1.1,1.7]	[0.8,1.0]	[0.6,0.9]	.	[0.8,1.3]
50-64 years	IRR	0.6*	.	1.2*	1.2*	0.8*	.	0.7	1.6*	0.8*	0.6*	.	0.6*
	CI	[0.5,0.7]	.	[1.1,1.4]	[1.1,1.4]	[0.8,0.9]	.	[0.5,1.0]	[1.3,2.1]	[0.7,0.9]	[0.5,0.8]	.	[0.5,0.8]
SES (Ref. High)													
Intermediate	IRR	.	.	0.9	1.0	0.9*	.	1.1	1.0	1.1	0.9	.	1.0
	CI	.	.	[0.9,1.0]	[0.9,1.10]	[0.8,0.9]	.	[0.7,1.7]	[0.8,1.2]	[1.0,1.3]	[0.7,1.1]	.	[0.8,1.4]
Low	IRR	.	.	0.7*	0.8*	0.9*	.	1.3	0.9	1.1	0.9	.	0.9
	CI	.	.	[0.6,0.8]	[0.7,0.9]	[0.8,0.9]	.	[0.9,2.0]	[0.6,1.2]	[1.0,1.4]	[0.7,1.1]	.	[0.7,1.2]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

12-months frequency of wine drinking (total population)

The average number of wine drinking days in past 12 months by survey is shown in Figure 2.6. Denmark exhibited the highest frequency (79.2 days), followed by Portugal (78.2 days), and France (64.5 days). Poland (7.1 days), Latvia (10.4 days), and Iceland (18.9 days) yielded the lowest values.

Figure 2.6. 12-months frequency of wine drinking by survey (days per year, total population)



The average number of wine drinking days in the past 12 months by gender and survey is illustrated in Table 2.12. A broad range from 7.9 days (PL_08) to 128.1 days (PT_12) was observed for males, while the range was much narrower among females (from 6.4 days in PL_08 to 81.1 days in DK_08). While in some Northern and Central European surveys gender ratios smaller than 1.0 implied higher wine drinking frequencies among females (NO_12, LV_11, ENG_13, SCT_13, NIR_10, DE_09, DE_12), all surveys from Eastern and Southern Europe as well as France yielded gender ratios greater than 1.0, implying higher values among males.

Table 2.12. 12-months frequency of wine drinking by gender and survey (days per year, total population)

	Males (M)	Females (M)	Gender Ratio
IS_12	.	.	.
IS_13	18.4	19.4	1.0
NO_12	28.2	32.4	0.9
SE_13	.	.	.

	Males (M)	Females (M)	Gender Ratio
FI_08	21.3	21.1	1.0
LV_11	8.2	12.4	0.7
DK_08	77.1	81.1	1.0
DK_10	71.9	74.8	1.0
DK_13	62.2	64.6	1.0
ENG_13	37.0	48.9	0.8
SCT_13	32.6	42.5	0.8
WLS_13	.	.	.
NIR_10	25.1	31.9	0.8
BE_13	.	.	.
DE_09	29.6	39.5	0.8
DE_12	25.4	38.2	0.7
FR_10	85.5	44.1	1.9
AT_08	.	.	.
PL_08	7.9	6.4	1.2
HU_09	76.6	24.6	3.1
SI_12	41.8	21.6	1.9
HR_11	60.0	20.9	2.9
IT_12	.	.	.
PT_12	128.1	31.0	4.1

M = mean; . no data available

Table 2.13 shows gender, age, and SES effects on 12-months frequency of wine drinking by survey. In seven Northern and Central European countries (LV_11, DK_10, ENG_13, SCT_13, NIR_10, DE_09, DE_12) being male slightly decreased the likelihood of drinking wine more frequently, while in Southern and Eastern European countries as well as in France the rate was higher for males. With the exception of Latvia, the rate of drinking wine more frequently increased with age in all surveys. Low SES was associated with a decreased rate in all cases.

Table 2.13. Gender, age, and SES relations with 12-months frequency of wine drinking by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	.	1.0	0.9	.	1.1	0.7*	0.9	0.9*	1.0*	0.7*	0.7*	.
	CI	.	[0.8,1.2]	[0.7,1.0]	.	[0.9,1.3]	[0.6,0.9]	[0.8,1.0]	[0.9,1.0]	[1.0,1.0]	[0.6,0.8]	[0.6,0.8]	.
Age (Ref. 18-29 years)		.											
30-49 years	IRR	.	1.8*	1.2	.	1.8*	0.8	1.7*	1.7*	1.6*	2.4*	2.2*	.
	CI	.	[1.4,2.3]	[1.0,1.6]	.	[1.5,2.3]	[0.7,1.0]	[1.5,2.0]	[1.7,1.8]	[1.6,1.7]	[2.1,2.9]	[1.8,2.6]	.
50-64 years	IRR	.	2.7*	2.1*	.	2.2*	0.6*	2.7*	3.0*	2.7*	4.0*	2.8*	.
	CI	.	[2.1,3.6]	[1.7,2.6]	.	[1.8,2.8]	[0.5,0.8]	[2.3,3.1]	[2.9,3.1]	[2.6,2.8]	[3.4,4.8]	[2.3,3.4]	.
SES (Ref. High)													
Intermediate	IRR	.	0.5*	0.7*	.	0.7*	0.5*	0.7*	0.7*	0.7*	0.7*	0.6*	.
	CI	.	[0.4,0.7]	[0.6,0.8]	.	[0.6,0.8]	[0.5,0.7]	[0.7,0.8]	[0.7,0.8]	[0.7,0.7]	[0.6,0.8]	[0.5,0.7]	.
Low	IRR	.	0.4*	0.5*	.	0.4*	0.6*	0.5*	0.6*	0.5*	0.3*	0.3*	.
	CI	.	[0.3,0.6]	[0.3,0.8]	.	[0.3,0.4]	[0.4,0.8]	[0.4,0.6]	[0.5,0.6]	[0.5,0.6]	[0.3,0.4]	[0.3,0.4]	.

		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	0.8*	.	0.6*	0.6*	2.0*	.	1.4	3.0*	2.0*	3.0*	.	4.1*
	CI	[0.7,0.9]	.	[0.6,0.7]	[0.6,0.7]	[1.9,2.1]	.	[1.0,2.0]	[2.6,3.6]	[1.8,2.2]	[2.6,3.5]	.	[3.6,4.7]
Age (Ref. 18-29 years)													
30-49 years	IRR	2.1*	.	1.6*	1.7*	1.8*	.	1.2	1.4*	1.4*	1.3*	.	3.7*
	CI	[1.6,2.6]	.	[1.5,1.8]	[1.6,1.9]	[1.7,1.9]	.	[0.8,1.8]	[1.1,1.8]	[1.2,1.5]	[1.1,1.6]	.	[2.9,4.6]
50-64 years	IRR	2.5*	.	2.3*	2.6*	3.6*	.	2.1*	2.1*	2.4*	2.1*	.	5.3*
	CI	[2.0,3.2]	.	[2.1,2.6]	[2.3,2.9]	[3.4,3.9]	.	[1.20,3.8]	[1.60,2.7]	[2.1,2.7]	[1.7,2.5]	.	[4.2,6.7]
SES (Ref. High)			.										
Intermediate	IRR	.	.	0.6*	0.9*	0.8*	.	0.5*	0.7*	0.7*	0.7*	.	0.8
	CI	.	.	[0.5,0.7]	[0.8,1:0]	[0.7,0.8]	.	[0.3,0.8]	[0.6,0.8]	[0.7,0.8]	[0.6,0.8]	.	[0.6,1.0]
Low	IRR	.	.	0.4*	0.5*	0.7*	.	0.2*	0.5*	0.6*	0.9*	.	1.0
	CI	.	.	[0.3,0.4]	[0.4,0.6]	[0.6,0.7]	.	[0.1,0:4]	[0.4,0.7]	[0.5,0.7]	[0.5,0.7]	.	[0.8,1.2]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

12-months frequency of spirits drinking (total population)

Figure 2.7 displays the average number of spirits drinking days in past 12 months by survey. In Hungary (28.7 days), Scotland (26.2 days), and Denmark (21.6/21.2 days) the highest values were observed. Slovenia (6.7 days), Iceland (9.0 days), and Norway (9.6 days) yielded the lowest frequencies.

Figure 2.7. 2-months frequency of spirits drinking by survey (days per year, total population)

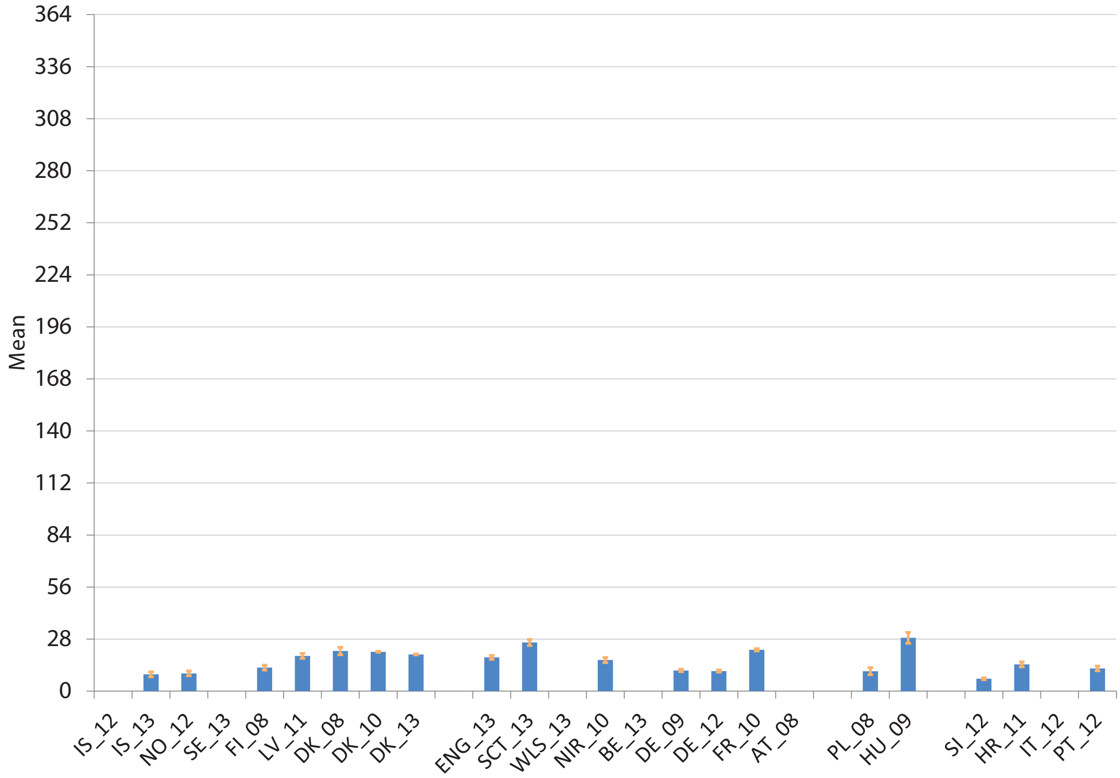


Table 2.14 shows the average number of spirits drinking days in the past 12 months by gender and survey. Among males, the highest frequency was found for Hungary (50.6 days), the lowest for Slovenia (8.5 days). Among females, Scotland exhibited the highest value (22.6 days), and Portugal the lowest (3.2 days). Gender ratios exceeding 1.0 in all surveys implied higher spirits drinking frequencies among males as compared to females. Greatest gender differences were found in Portugal (gender ratio = 6.7), smallest in England (gender ratio = 1.2).

Table 2.14. 12-months frequency of spirits drinking by gender and survey (days per year, total population)

	Males (M)	Females (M)	Gender Ratio
IS_12	.	.	.
IS_13	12.6	5.4	2.3
NO_12	13.9	5.1	2.7
SE_13	.	.	.

	Males (M)	Females (M)	Gender Ratio
FI_08	19.8	5.5	3.6
LV_11	31.0	7.8	4.0
DK_08	26.2	17.2	1.5
DK_10	25.9	16.4	1.6
DK_13	23.7	15.8	1.5
ENG_13	19.8	16.6	1.2
SCT_13	30.0	22.6	1.3
WLS_13	.	.	.
NIR_10	19.4	14.1	1.4
BE_13	.	.	.
DE_09	15.0	7.2	2.1
DE_12	14.3	7.2	2.0
FR_10	33.4	11.4	2.9
AT_08	.	.	.
PL_08	16.5	5.1	3.2
HU_09	50.6	11.5	4.4
SI_12	8.5	4.7	1.8
HR_11	21.3	7.5	2.8
IT_12	.	.	.
PT_12	21.7	3.2	6.7

M = mean; . = no data available

Without exception, males had an increased rate of drinking spirits more frequently (Table 2.15). The greatest effect was found for Portugal (IRR = 7.4), the smallest for England (IRR = 1.2). No clear pattern was found with regards to age effects. In some surveys, the frequency of spirits drinking decreased with age (DK_08, DK_10, DK_13, DE_09, DE_12, FR_10, SI_12, HR_11), while an inverse effect was observed in other cases (FI_08, LV_11, SCT_13). In Latvia and France, the odds on drinking spirits more frequently were higher for those with low SES. A lower rate of the low SES group was found in England and Slovenia.

Table 2.15. Gender, age, and SES relations with 12-months frequency of spirits drinking by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	.	2.4*	2.9*	.	3.5*	3.8*	1.7*	1.7*	1.6*	1.2*	1.3*	.
	CI	.	[1.8,3.1]	[2.1,3.8]	.	[2.8,4.3]	[3.3,4.4]	[1.3,2.1]	[1.7,1.7]	[1.5,1.6]	[1.1,1.4]	[1.2,1.5]	.
Age (Ref. 18-29 years)													
30-49 years	IRR	.	0.8	0.5*	.	1.1	1.3*	0.3*	0.4*	0.5*	0.8*	0.9	.
	CI	.	[0.6,1.1]	[0.3,0.6]	.	[0.9,1.4]	[1.1,1.5]	[0.2,0.4]	[0.4,0.4]	[0.4,0.5]	[0.7,0.9]	[0.8,1.1]	.
50-64 years	IRR	.	0.8	0.8	.	1.6*	1.3*	0.6*	0.6*	0.6*	1.1	1.5*	.
	CI	.	[0.6,1.0]	[0.5,1.1]	.	[1.3,2.1]	[1.1,1.5]	[0.4,0.7]	[0.6,0.6]	[0.6,0.6]	[1.0,1.3]	[1.3,1.8]	.
SES (Ref. High)													
Intermediate	IRR	.	0.8	1.1	.	1.0	1.5*	0.8*	0.9*	1.0	1.1*	1.0	.
	CI	.	[0.6,1.1]	[0.8,1.5]	.	[0.8,1.4]	[1.3,1.8]	[0.6,1.0]	[0.9,1.0]	[0.9,1.0]	[1.0,1.3]	[0.9,1.2]	.
Low	IRR	.	0.7	1.2	.	1.1	1.8*	0.9	1.0	1.0*	0.8*	0.9	.
	CI	.	[0.5,1.0]	[0.7,2.0]	.	[0.9,1.5]	[1.4,2.2]	[0.6,1.3]	[1.0,1.1]	[1.0,1.1]	[0.6,0.9]	[0.8,1.0]	.

		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	1.3*	.	2.1*	2.0*	2.9*	.	3.2*	4.4*	1.9*	3.0*	.	7.4*
	CI	[1.1,1.6]	.	[1.8,2.4]	[1.8,2.3]	[2.7,3.1]	.	[2.0,4.9]	[3.5,5.5]	[1.6,2.2]	[2.5,3.7]	.	[5.8,9.4]
Age (Ref. 18-29 years)													
30-49 years	IRR	0.7*	.	0.6*	0.6*	0.8*	.	1.1	1.1	0.6*	0.5*	.	0.9
	CI	[0.6,0.8]	.	[0.5,0.7]	[0.5,0.7]	[0.7,0.8]	.	[0.6,1.9]	[0.8,1.5]	[0.5,0.7]	[0.4,0.6]	.	[0.7,1.1]
50-64 years	IRR	1.0	.	0.8*	0.7*	0.8*	.	0.9	1.2	0.8*	0.7*	.	0.7
	CI	[0.8,1.2]	.	[0.7,0.9]	[0.6,0.8]	[0.8,0.9]	.	[0.5,1.5]	[0.9,1.6]	[0.7,1.0]	[0.6,0.9]	.	[0.5,1.0]
SES (Ref. High)													
Intermediate	IRR	.	.	0.9	1.1	1.1*	.	1.0	0.9	0.9	0.7	.	1.1
	CI	.	.	[0.8,1.1]	[1.0,1.3]	[1.0,1.2]	.	[0.6,1.5]	[0.7,1.1]	[0.7,1.1]	[0.6,1.0]	.	[0.8,1.5]
Low	IRR	.	.	0.8	1.1	1.3*	.	1.1	0.9	0.7*	0.9	.	0.9
	CI	.	.	[0.6,1.1]	[0.9,1.4]	[1.2,1.4]	.	[0.6,1.8]	[0.6,1.3]	[0.6,0.9]	[0.6,1.2]	.	[0.7,1.2]

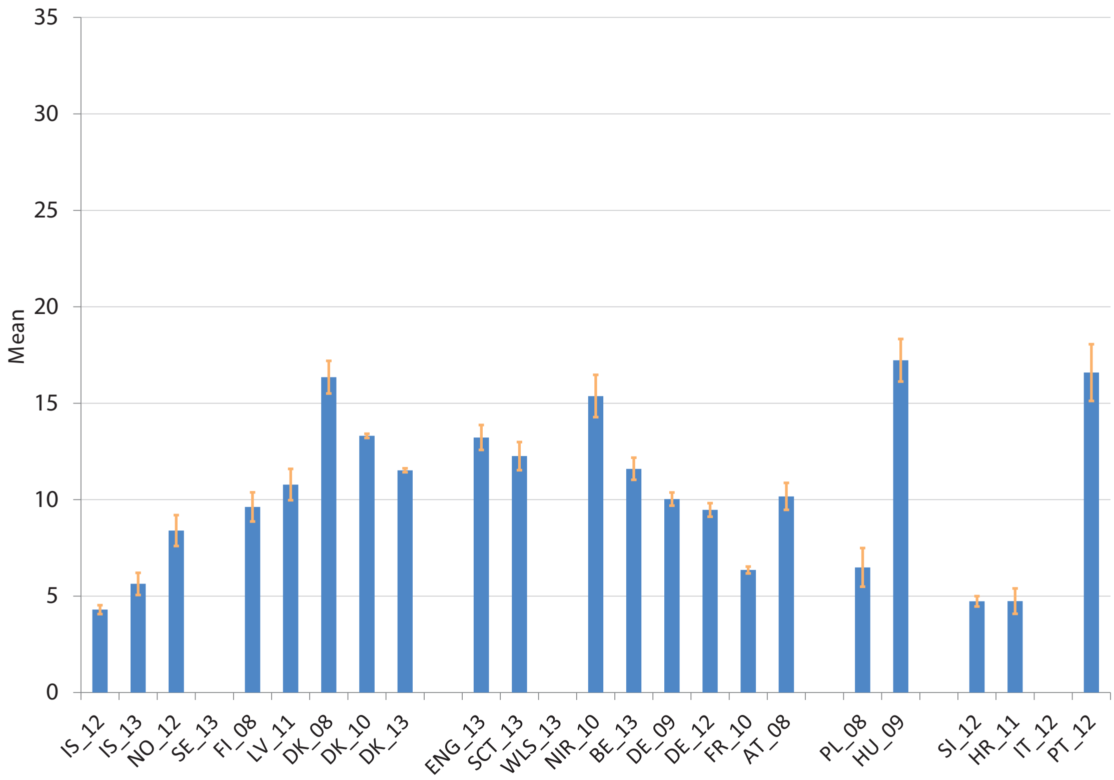
IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

Drinking quantity

Daily drinking quantity (total population)

Figure 2.8 shows mean grams of pure alcohol per day (g/d) by survey. Hungary (17.2 g/d), Austria (16.6 g/d), and Denmark (16.4 g/d) exhibited the highest drinking quantities, whereas the lowest values were observed in Iceland (4.3 g/d), Slovenia (4.7 g/d), and Croatia (4.7 g/d).

Figure 2.8. Overall drinking quantity of pure alcohol by survey (grams per day, total population)



Overall drinking quantity of pure alcohol (grams per day) by gender and survey is displayed in Table 2.16. Among males, the average quantity of drinking ranged from 5.7 grams per day (IS_12) to 30.4 grams per day (PT_12). Among females, a narrower range from 1.2 grams (HR_12) to 11.8 grams (DK_08) was observed. Gender ratios ranged from 1.8 (DK_08, SCT_13) to 8.7 (PT_12). Eastern and Southern European countries tended to exhibit higher gender ratios, and as consequence, higher gender differences as compared to Northern European countries.

Table 2.16. Overall drinking quantity of pure alcohol by gender and survey (grams per day, total population)

	Males (M)	Females (M)	Gender Ratio
IS_12	5.7	2.9	2.0
IS_13	8.0	3.3	2.4
NO_12	11.4	5.3	2.2

	Males (M)	Females (M)	Gender Ratio
SE_13	.	.	.
FI_08	14.5	4.6	3.2
LV_11	18.1	4.0	4.5
DK_08	20.8	11.8	1.8
DK_10	17.8	8.8	2.0
DK_13	15.1	7.9	1.9
ENG_13	18.0	8.5	2.1
SCT_13	15.9	8.8	1.8
WLS_13	.	.	.
NIR_10	22.4	8.5	2.6
BE_13	15.1	7.4	2.1
DE_09	13.8	6.2	2.2
DE_12	12.8	6.0	2.1
FR_10	9.7	3.1	3.1
AT_08	14.7	5.4	2.7
PL_08	11.3	1.8	6.3
HU_09	27.1	6.8	4.0
SI_12	7.2	2.1	3.5
HR_11	8.0	1.2	6.9
IT_12	.	.	.
PT_12	30.4	3.5	8.7

M = mean; . = no data available

Without exception, males had an increased likelihood for drinking higher quantities (Table 2.17). The effect tended to be strongest in Eastern and Southern European countries. In eight surveys (IS_12, NO_12, LV_11, DK_08, DK_10, NIR_10, HU_09, SI_12), people in the oldest age group had a decreased rate of higher drinking quantities, while the rate was increased in four surveys (ENG_13, BE_13, FR_10, PT_12). The low SES group showed lower rates in IS_13, ENG_13, BE_13, DE_09, and HU_09. An opposite effect was found for three surveys (LV_11, DK_10, DK_13).

Table 2.17. Gender, age, and SES relations with overall drinking quantity of pure alcohol by survey (grams per day, total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	2.0*	2.6*	2.2*	.	3.1*	4.3*	1.7*	2.0*	1.9*	2.2*	1.8*	.
	CI	[1.7,2.3]	[2.1,3.1]	[1.9,2.6]	.	[2.7,3.6]	[3.8,5.0]	[1.6,1.9]	[2.0,2.1]	[1.9,2.0]	[2.0,2.4]	[1.6,2.1]	.
Age (Ref. 18-29 years)													
30-49 (years)	IRR	0.6*	0.9	0.6*	.	1.0	0.9	0.5*	0.6*	0.6*	1.3*	1.0	.
	CI	[0.6,0.8]	[0.7,1.2]	[0.5,0.7]	.	[0.9,1.2]	[0.8,1.1]	[0.4,0.6]	[0.6,0.6]	[0.6,0.7]	[1.1,1.4]	[0.8,1.2]	.
50-64 (years)	IRR	0.8*	0.9	0.8*	.	0.9	0.6*	0.6*	0.9*	1.0*	1.5*	1.1	.
	CI	[0.7,0.9]	[0.7,1.2]	[0.6,1.0]	.	[0.8,1.0]	[0.5,0.8]	[0.5,0.7]	[0.9,0.9]	[0.9,1.0]	[1.3,1.7]	[0.9,1.4]	.
SES (Ref. High)													
Intermediate	IRR	1.0	0.7*	0.9	.	1.0	1.4*	0.9	1.0*	1.0	1.1	1.0	.
	CI	[0.9,1.2]	[0.6,0.9]	[0.8,1.1]	.	[0.8,1.2]	[1.2,1.6]	[0.9,1.0]	[1.0,1.0]	[1.0,1.0]	[1.0,1.2]	[0.9,1.2]	.
Low	IRR	0.9	0.6*	1.1	.	1.1	1.8*	1.1	1.1*	1.1*	0.8*	0.9	.
	CI	[0.8,1.0]	[0.5,0.8]	[0.8,1.7]	.	[0.9,1.4]	[1.5,2.3]	[0.9,1.3]	[1.1,1.1]	[1.1,1.2]	[0.7,1.0]	[0.8,1.0]	.

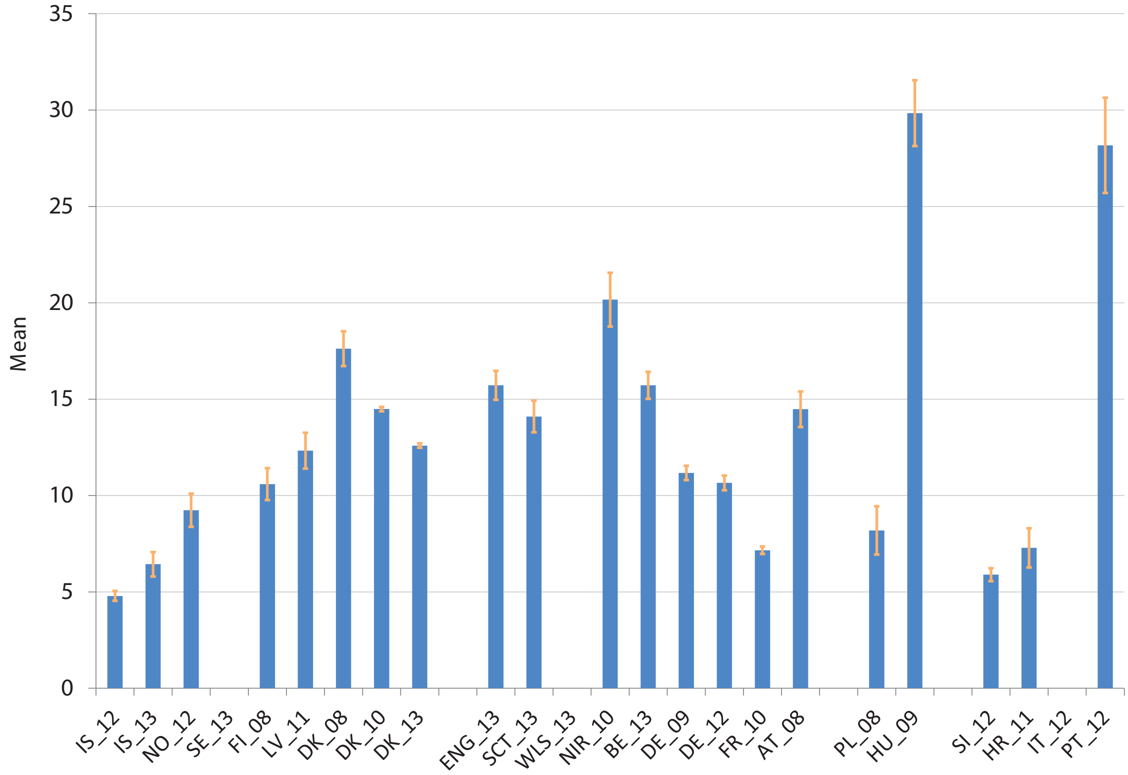
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	2.6*	2.2*	2.2*	2.2*	3.1*	2.8*	6.0*	4.2*	3.5*	7.2*	.	8.4*
	CI	[2.3,3.0]	[1.9,2.4]	[2.0,2.4]	[2.0,2.3]	[2.9,3.3]	[2.4,3.2]	[4.6,8.0]	[3.7,4.7]	[3.0,4.1]	[5.4,9.7]	.	[7.1,10.0]
Age (Ref. 18-29 years)													
30-49 (years)	IRR	0.9	0.9	0.8*	0.9*	0.9*	1.0	1.0	0.8*	0.6*	0.7	.	1.8*
	CI	[0.7,1.0]	[0.8,1.1]	[0.8,0.9]	[0.8,0.9]	[0.8,1.0]	[0.9,1.2]	[0.7,1.4]	[0.7,0.9]	[0.5,0.7]	[0.5,1.0]	.	[1.5,2.3]
50-64 (years)	IRR	0.7*	1.4*	1.0	1.0	1.3*	1.1	0.8	0.7*	0.7*	0.8	.	1.9*
	CI	[0.6,0.9]	[1.2,1.6]	[0.9,1.1]	[0.9,1.1]	[1.2,1.4]	[0.9,1.3]	[0.5,1.1]	[0.6,0.8]	[0.6,0.8]	[0.5,1.1]	.	[1.5,2.4]
SES (Ref. High)													
Intermediate	IRR	.	1.0	0.9*	1.1	0.9*	1.0	1.2	0.8*	1.0	0.7	.	0.9
	CI	.	[0.9,1.1]	[0.9,1.0]	[1.0,1.1]	[0.8,0.9]	[0.8,1.4]	[0.8,1.6]	[0.7,0.9]	[0.9,1.2]	[0.5,1.1]	.	[0.7,1.2]
Low	IRR	.	0.7*	0.7*	0.8	0.9	0.9	1.3	0.7*	1.1	0.7	.	0.9
	CI	.	[0.6,0.9]	[0.6,0.8]	[0.9,1.0]	[0.9,1.0]	[0.7,1.1]	[0.9,1.9]	[0.6,0.9]	[0.9,1.4]	[0.5,1.1]	.	[0.7,1.2]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = $p < 0.05$; . = no data available

Daily drinking quantity (drinkers only)

Figure 2.9 shows mean grams of pure alcohol per day (g/d) by survey among drinkers (abstainers excluded). Drinkers from Hungary (29.8 g/d) and Portugal (28.2 g/d), followed by Northern Ireland (20.2 g/d) exhibited the highest drinking quantities. The lowest values were observed in Iceland (4.8/6.4 g/d), Slovenia (5.9 g/d), and France (7.2 g/d).

Figure 2.9. Overall drinking quantity of pure alcohol by survey (grams per day, drinkers only)



The overall drinking quantity of pure alcohol among male drinkers ranged between 6.3 g/d in Iceland (2012) and 41.2 g/d in Portugal (Table 2.18). A range from 2.3 g/d (HR_11) to 16.6 g/d (HU_09) was observed among female drinkers. Gender ratios varied between 1.6 in Belgium and 5.3 in Poland and Portugal. Gender differences tended to be greater in Eastern and Southern as compared to Northern and Central European countries.

Table 2.18. Overall drinking quantity of pure alcohol by gender and survey (grams per day, drinkers only)

	Males (M)	Females (M)	Gender Ratio
IS_12	6.3	3.3	1.9
IS_13	9.1	3.8	2.4
NO_12	12.2	6.0	2.0
SE_13	.	.	.
FI_08	15.9	5.1	3.1

	Males (M)	Females (M)	Gender Ratio
LV_11	20.3	4.6	4.4
DK_08	22.1	12.9	1.7
DK_10	18.8	9.8	1.9
DK_13	16.1	8.8	1.8
ENG_13	20.9	10.3	2.0
SCT_13	17.8	10.4	1.7
WLS_13	.	.	.
NIR_10	28.7	11.4	2.5
BE_13	18.6	11.4	1.6
DE_09	15.0	7.1	2.1
DE_12	14.2	6.9	2.1
FR_10	10.5	3.7	2.9
AT_08	19.5	8.4	2.3
PL_08	13.1	2.5	5.3
HU_09	36.9	16.6	2.2
SI_12	8.5	2.8	3.1
HR_11	10.2	2.3	4.5
IT_12	.	.	.
PT_12	41.2	7.8	5.3

M = mean; . = no data available

Table 2.19 displays gender, age, and SES effects on overall drinking quantity of pure alcohol among drinkers by survey. In all surveys, being male was associated with an increased likelihood of drinking higher quantities, with a maximum effect in Portugal (IRR = 4.9). In six surveys (IS_12, LV_11, DK_08, NIR_10, HU_09, SI_12), a lower rate of higher drinking quantities was found among people in the oldest age group, while in five surveys (ENG_13, BE_13, FR_10, AT_08, PT_12), the effect was inverse. A higher rate among low SES people was found in nine surveys (LV_11, DK_08, DK_10, DK_13, BE_13, PL_08, HU_09, SI_12), while a decreased rate was observed for IS_13 and DE_09).

Table 2.19. Gender, age, and SES relations with overall drinking quantity of pure alcohol by survey (grams per day, drinkers only)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	1.9*	2.6*	2.1*	.	3.0*	4.2*	1.7*	1.9*	1.8*	2.0*	1.7*	.
	CI	[1.7,2.2]	[2.1,3.1]	[1.8,2.4]	.	[2.7,3.5]	[3.6,4.8]	[1.5,1.9]	[1.9,2.0]	[1.8,1.9]	[1.9,2.2]	[1.5,2.0]	.
Age (Ref. 18-29 years)													
30-49 years	IRR	0.7*	0.9	0.6*	.	1.0	0.9	0.5*	0.6*	0.7*	1.2*	1.0	.
	CI	[0.6,0.8]	[0.7,1.1]	[0.5,0.8]	.	[0.9,1.2]	[0.8,1.1]	[0.5,0.6]	[0.6,0.7]	[0.6,0.7]	[1.1,1.4]	[0.8,1.2]	.
50-64 years	IRR	0.8*	0.9	0.8	.	0.9	0.7*	0.6*	1.0*	1.0	1.3*	1.1	.
	CI	[0.7,0.9]	[0.7,1.2]	[0.7,1.0]	.	[0.8,1.1]	[0.6,0.8]	[0.6,0.7]	[0.9,1.0]	[1.0,1.0]	[1.2,1.5]	[0.9,1.4]	.
SES (Ref. High)													
Intermediate	IRR	1.0	0.7*	1.0	.	1.0	1.4*	1.0	1.1*	1.0	1.0	1.0	.
	CI	[0.9,1.2]	[0.6,0.9]	[0.8,1.1]	.	[0.8,1.2]	[1.2,1.6]	[0.9,1.1]	[1.0,1.1]	[1.0,1.0]	[0.9,1.2]	[0.9,1.2]	.
Low	IRR	0.9	0.7*	1.2	.	1.2	1.9*	1.2*	1.2*	1.2*	1.0	1.0	.
	CI	[0.8,1.1]	[0.5,0.9]	[0.9,1.8]	.	[0.9,1.5]	[1.6,2.3]	[1.0,1.5]	[1.2,1.3]	[1.2,1.3]	[0.9,1.2]	[0.9,1.1]	.

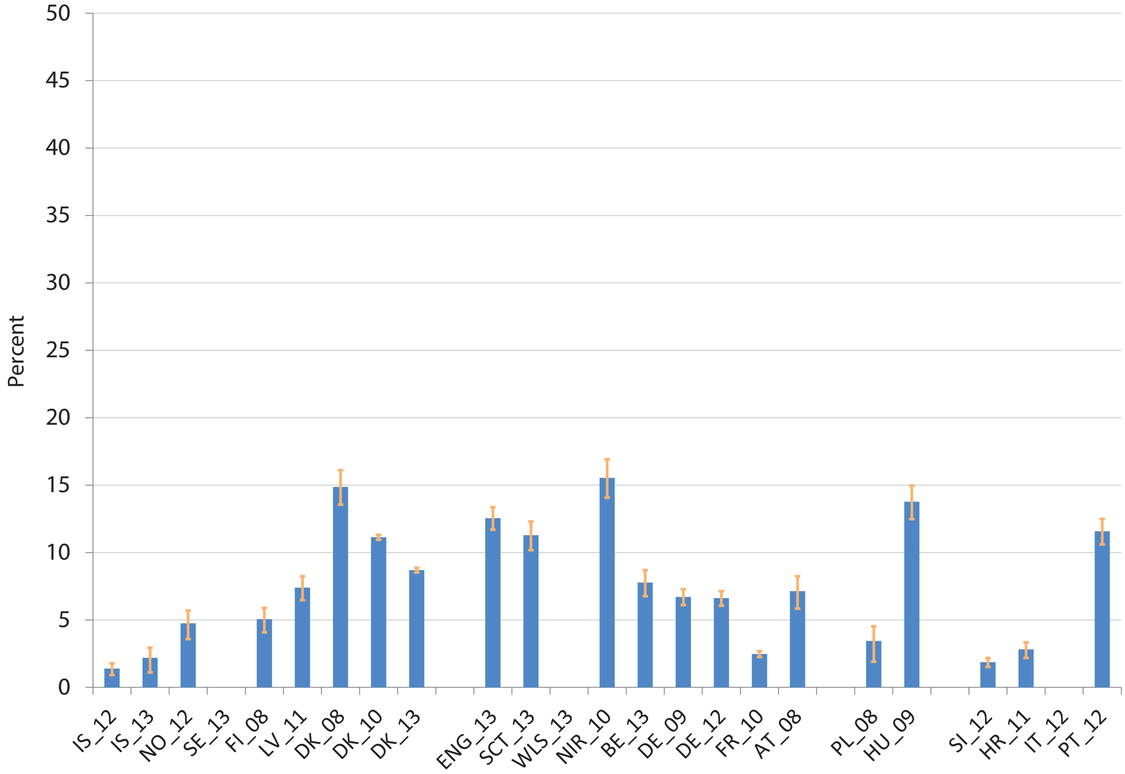
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	2.5*	1.6*	2.1*	2.1*	2.9*	2.4*	4.8*	2.4*	3.1*	4.5*	.	4.9*
	CI	[2.2,2.9]	[1.5,1.7]	[2.0,2.3]	[2.0,2.3]	[2.7,3.0]	[2.1,2.7]	[3.7,6.3]	[2.0,2.5]	[2.7,3.6]	[3.3,6.0]	.	[4.2,5.8]
Age (Ref. 18-29 years)													
30-49 years	IRR	0.9	0.9	0.9*	0.9*	0.9*	1.0	1.0	0.8*	0.7*	0.9	.	1.9*
	CI	[0.8,1.1]	[0.8,1.0]	[0.8,1.0]	[0.8,1.0]	[0.8,0.9]	[0.9,1.2]	[0.7,1.4]	[0.7,1.0]	[0.6,0.7]	[0.6,1.3]	.	[1.6,2.4]
50-64 years	IRR	0.8*	1.2*	1.1	1.1	1.2*	1.2*	0.9	0.7*	0.8*	1.1	.	2.1*
	CI	[0.7,1.0]	[1.0,1.3]	[1.0,1.1]	[1.0,1.2]	[1.1,1.3]	[1.0,1.4]	[0.6,1.3]	[0.7,0.8]	[0.7,0.9]	[0.8,1.6]	.	[1.7,2.6]
SES (Ref. High)													
Intermediate	IRR	.	1.1*	1.0	1.1	0.9*	1.1	1.3	1.0	1.1	0.9	.	1.1
	CI	.	[1.1,1.3]	[0.9,1.1]	[1.0,1.2]	[0.8,1.0]	[0.8,1.4]	[0.9,1.8]	[0.9,1.1]	[1.0,1.3]	[0.6,1.4]	.	[0.8,1.4]
Low	IRR	.	1.2*	0.9*	1.0	1.0	1.0	1.6*	1.3*	1.4*	1.1	.	1.2
	CI	.	[1.1,1.4]	[0.7,1.0]	[0.8,1.2]	[1.0,1.1]	[0.8,1.2]	[1.2,2.3]	[1.0,1.6]	[1.1,1.8]	[0.7,1.6]	.	[1.0,1.5]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

12-months prevalence of daily hazardous drinking (total population)

The 12-months prevalence of daily hazardous drinking (males/females: >40/>20 grams of pure alcohol per day) by survey is illustrated in Figure 2.10. Highest proportions of daily hazardous drinkers were found for Northern Ireland (15.4%), Denmark (14.9%), and Hungary (13.8%), lowest for Iceland (1.4/2.2%), Slovenia (1.9%), and France (2.5%).

Figure 2.10. 12-months prevalence of daily hazardous drinking by survey (males/females: >40/>20 grams of pure alcohol per day, total population)



Proportions of daily hazardous drinking among males ranged from 1.1% in Iceland to 19.0% in Portugal (Table 2.20). Among females, values varied between 0.9% in Poland and 17.2% in Denmark. In IS_12, NO_12, DK_08, DK_10, DK_13, SCT_13, and DE_12, gender ratios below 1.0 implied higher values among females, while in most other surveys, males exhibited higher proportions of daily hazardous drinkers. The largest gender differences were found for Poland (gender ratio = 6.7).

Table 2.20. 2-months prevalence of daily hazardous drinking by gender and survey (males/females: >40/>20 grams of pure alcohol per day, total population)

	Males (%)	Females (%)	Gender Ratio
IS_12	1.1	1.7	0.6
IS_13	2.6	1.8	1.5
NO_12	4.6	4.9	0.9
SE_13	.	.	.

	Males (%)	Females (%)	Gender Ratio
FI_08	7.0	3.1	2.3
LV_11	11.7	3.4	3.4
DK_08	12.6	17.2	0.7
DK_10	10.8	11.5	0.9
DK_13	7.9	9.5	0.8
ENG_13	12.5	12.6	1.0
SCT_13	10.8	11.7	0.9
WLS_13	.	.	.
NIR_10	17.1	14.0	1.2
BE_13	7.7	7.9	1.0
DE_09	6.6	6.9	1.0
DE_12	6.5	6.8	0.9
FR_10	2.9	2.1	1.4
AT_08	8.1	6.1	1.3
PL_08	6.0	0.9	6.7
HU_09	18.8	8.5	2.2
SI_12	2.5	1.2	2.0
HR_11	4.4	1.1	4.2
IT_12	6.2	1.0	6.0
PT_12	19.0	4.5	4.2

% = percent; . = no data available

Table 2.21 shows gender, age, and SES relations with 12-months prevalence of daily hazardous drinking by survey. In most surveys, males had an increased likelihood, while in some cases, being male had a negative (DK_08, DK_10, DK_13) or no relationship (IS_12, IS_13, NO_12, ENG_13, SCT_13, BE_13, DE_09, DE_12). In DK_08, DK_10, DK_13, NIR_10, HU_09, and SI_12, the oldest age group had a decreased rate of daily hazardous drinking, while an inverse effect was found in five surveys (ENG_13, SCT_13, BE_13, IT_12, PT_12). Low SES increased the rate of daily hazardous drinking in Latvia, Denmark, Slovenia, Italy and Portugal, while the opposite was found in Hungary.

Table 2.21. Gender, age, and SES relations with 12-months prevalence of daily hazardous drinking by survey (males/females: >40/>20 grams of pure alcohol per day, total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	OR	0.6	1.7	1.0	.	2.3*	3.3*	0.7*	0.9*	0.8*	1.0	0.9	.
	CI	[0.3,1.1]	[0.7,4.0]	[0.6,1.5]	.	[1.5,3.4]	[2.5,4.4]	[0.5,0.8]	[0.9,1.0]	[0.8,0.8]	[0.9,1.2]	[0.7,1.1]	.
Age (Ref. 18-29)													
30-49	OR	0.4*	1.2	0.4*	.	0.9	1.7*	0.2*	0.3*	0.3*	1.2	1.1	.
	CI	[0.2,0.9]	[0.3,4.5]	[0.2,0.8]	.	[0.6,1.5]	[1.2,2.3]	[0.2,0.3]	[0.3,0.3]	[0.3,0.4]	[0.9,1.5]	[0.8,1.5]	.
50-64	OR	0.5	1.1	0.7	.	0.9	1.2	0.4*	0.7*	0.7*	1.8*	1.6*	.
	CI	[0.3,1.0]	[0.3,4.4]	[0.4,1.2]	.	[0.5,1.5]	[0.9,1.7]	[0.3,0.5]	[0.7,0.8]	[0.7,0.8]	[1.4,2.2]	[1.1,2.2]	.
SES (Ref. High)													
Intermediate	OR	1.6	0.2*	1.0	.	1.3	1.9*	0.9	1.2*	1.2*	1.2	1.0	.
	CI	[0.7,3.7]	[0.1,0.8]	[0.6,1.7]	.	[0.7,2.6]	[1.2,3.1]	[0.7,1.2]	[1.2,1.3]	[1.1,1.2]	[1.0,1.4]	[0.8,1.3]	.
Low	OR	1.7	0.3	1.8	.	1.7	3.7*	1.1	1.5*	1.6*	0.9	0.8	.
	CI	[0.7,3.9]	[0.1,1.3]	[0.9,3.7]	.	[0.9,3.1]	[2.2,6.3]	[0.8,1.6]	[1.4,1.6]	[1.5,1.7]	[0.7,1.1]	[0.6,1.0]	.

		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	OR	1.3*	0.9	0.9	1.0	1.4*	1.4*	6.8*	2.5*	1.9*	4.3*	6.4*	5.1*
	CI	[1.0,1.6]	[0.7,1.2]	[0.8,1.1]	[0.8,1.2]	[1.2,1.6]	[1.0,2.1]	[2.2,20.8]	[2.0,3.1]	[1.3,2.8]	[2.6,7.1]	[5.4,7.7]	[4.1,6.3]
Age (Ref. 18-29)													
30-49	OR	0.7*	0.8	0.7*	0.8	0.6*	1.0	1.4	0.7*	0.4*	0.9	2.0*	2.2*
	CI	[0.6,1.0]	[0.5,1.2]	[0.5,0.8]	[0.7,1.0]	[0.5,0.8]	[0.7,1.4]	[0.4,4.3]	[0.5,0.9]	[0.3,0.7]	[0.5,1.5]	[1.6,2.5]	[1.6,2.9]
50-64	OR	0.6*	1.8*	1.2	1.1	0.9	1.2	2.0	0.6*	0.5*	1.2	3.6*	2.7*
	CI	[0.5,0.8]	[1.2,2.7]	[0.9,1.5]	[0.9,1.3]	[0.8,1.2]	[0.8,1.8]	[0.6,6.1]	[0.4,0.8]	[0.3,0.7]	[0.7,2.0]	[2.9,4.6]	[1.9,3.7]
SES (Ref. High)													
Intermediate	OR	.	1.3	1.0	1.0	0.8	1.0	4.7	0.8	1.4	1.1	1.3*	1.3
	CI	.	[1.0,1.9]	[0.8,1.2]	[0.8,1.3]	[0.7,1.1]	[0.5,1.9]	[0.6,38.1]	[0.6,1.1]	[0.7,2.7]	[0.5,2.1]	[1.1,1.7]	[0.9,1.8]
Low	OR	.	1.1	0.7	0.7	1.2	0.8	7.8	0.6*	2.1*	1.4	2.0*	1.3
	CI	.	[0.8,1.6]	[0.5,1.0]	[0.5,1.0]	[0.9,1.5]	[0.4,1.5]	[1.0,60.2]	[0.4,0.9]	[1.1,4.1]	[0.7,2.9]	[1.6,2.5]	[1.0,1.7]

OR = odds ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

Daily beer drinking quantity (beer drinkers only)

The average beer drinking quantity of pure alcohol among beer drinkers by survey is illustrated in Figure 2.11. Highest quantities were found for Northern Ireland (17.4 g/d), Portugal (12.6 g/d), and Denmark (13.3 g/d), lowest quantities were observed in Slovenia (3.6 g/d), Croatia (4.4 g/d), and Iceland (4.5 g/d).

Figure 2.11. Beer drinking quantity of pure alcohol by survey (grams per day, beer drinkers only)

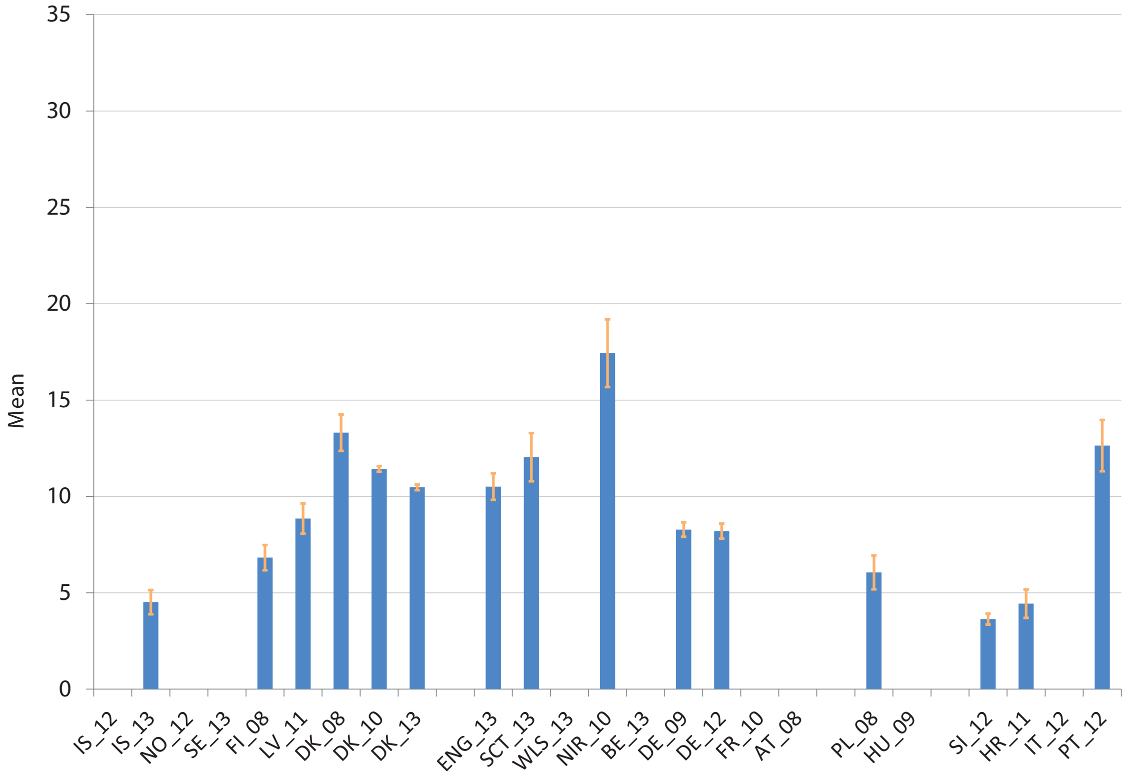


Table 2.22 shows beer drinking quantity of pure alcohol among beer drinkers by gender and survey. Among male beer drinkers, the average quantity ranged from 4.9 g/d (SI_12) to 21.4 g/d (NIR_10). Among female beer drinkers, the range was between 1.2 g/d HR_11) and 9.0 g/d (DK_08). Gender ratios exceeded 1.0, i.e. beer drinking quantity was higher among males than females in all surveys. Ratios varied between 1.7 in Denmark and 5.1 in Croatia.

Table 2.22. Beer drinking quantity of pure alcohol by gender and survey (grams per day, beer drinkers only)

	Males (M)	Females (M)	Gender Ratio
IS_12	.	.	.
IS_13	6.6	2.0	3.2
NO_12	.	.	.
SE_13	.	.	.
FI_08	9.4	2.8	3.4

	Males (M)	Females (M)	Gender Ratio
LV_11	12.6	2.5	5.1
DK_08	15.2	9.0	1.7
DK_10	13.5	6.8	2.0
DK_13	12.4	6.6	1.9
ENG_13	14.7	3.8	4.0
SCT_13	14.7	5.4	2.7
WLS_13	.	.	.
NIR_10	21.4	6.9	3.1
BE_13	.	.	.
DE_09	10.8	3.5	3.1
DE_12	10.7	3.4	3.2
FR_10	.	.	.
AT_08	.	.	.
PL_08	8.4	2.3	3.7
HU_09	.	.	.
SI_12	4.9	1.3	3.7
HR_11	5.8	1.2	4.8
IT_12	.	.	.
PT_12	16.0	3.8	4.3

M = mean; . = no data available

Table 2.23 displays gender, age, and SES relations with beer drinking quantity of pure alcohol among beer drinkers by survey. Without exception, being male was associated with an increased likelihood for drinking higher quantities of beer, with a maximum effect in Croatia (IRR = 4.7). In six surveys (FI_08, DK_08, DK_10, DK_13, NIR_10, SI_12), the oldest age group had a decreased rate of higher beer drinking quantities. The only exception was DE_12, where the rate was increased among the oldest. In most of the surveys, low SES was associated with an increased rate of higher beer drinking quantities.

Table 2.23. Gender, age, and SES relations with beer drinking quantity of pure alcohol by survey (grams per day, beer drinkers only)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	.	3.3*	.	.	3.3*	4.6*	1.8*	2.0*	1.9*	3.9*	3.0*	.
	CI	.	[2.6,4.3]	.	.	[2.7,4.0]	[3.7,5.8]	[1.5,2.1]	[1.9,2.0]	[1.9,2.0]	[3.4,4.4]	[2.1,4.4]	.
Age (Ref. 18-29 years)													
30-49 years	IRR	.	0.8	.	.	0.8	1.1	0.6*	0.7*	0.7*	0.9	0.7	.
	CI	.	[0.6,1.1]	.	.	[0.7,1.0]	[0.9,1.4]	[0.5,0.7]	[0.7,0.7]	[0.7,0.7]	[0.8,1.1]	[0.5,1.0]	.
50-64 years	IRR	.	0.8	.	.	0.7*	0.8	0.6*	0.8*	0.9*	0.9	0.7	.
	CI	.	[0.6,1.1]	.	.	[0.5,0.8]	[0.6,1.1]	[0.5,0.7]	[0.8,0.8]	[0.8,0.9]	[0.7,1.0]	[0.5,1.0]	.
SES (Ref. High)													
Intermediate	IRR	.	0.7*	.	.	1.3	1.9*	1.3*	1.4*	1.3*	1.3*	1.6*	.
	CI	.	[0.6,1.0]	.	.	[1.0,1.8]	[1.5,2.4]	[1.1,1.5]	[1.4,1.5]	[1.3,1.4]	[1.2,1.5]	[1.1,2.2]	.
Low	IRR	.	0.7	.	.	1.7*	3.0*	1.8*	1.8*	1.7*	1.8*	1.8*	.
	CI	.	[0.5,1.0]	.	.	[1.2,2.3]	[2.3,4.0]	[1.4,2.2]	[1.7,1.9]	[1.6,1.8]	[1.5,2.2]	[1.5,2.2]	.

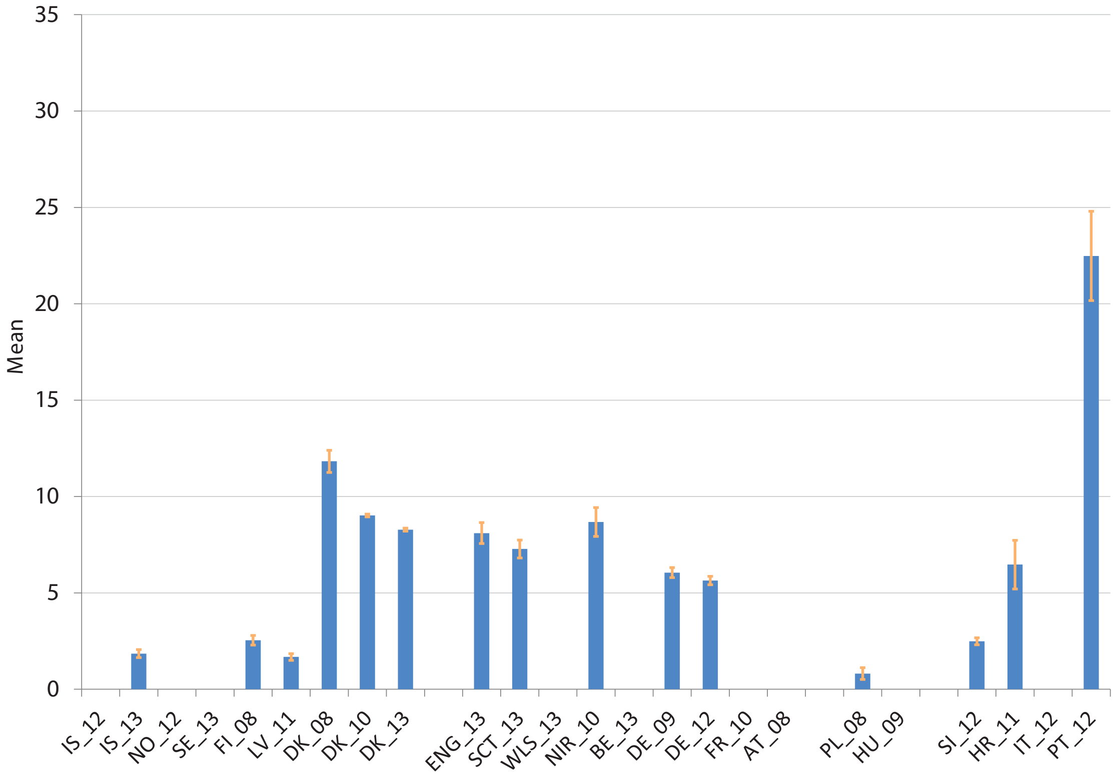
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	3.1*	.	3.1*	3.2*	.	.	3.3*	.	4.0*	4.7*	.	3.8*
	CI	[2.6,3.9]	.	[2.9,3.5]	[2.8,3.6]	.	.	[2.5,4.5]	.	[3.3,4.7]	[3.4,6.5]	.	[2.9,5.0]
Age (Ref. 18-29 years)													
30-49 years	IRR	0.8*	.	0.9	1.1	.	.	0.9	.	0.7*	0.9	.	1.4*
	CI	[0.6,1.0]	.	[0.8,1.0]	[1.0,1.2]	.	.	[0.7,1.3]	.	[0.6,0.8]	[0.6,1.2]	.	[1.1,1.7]
50-64 years	IRR	0.7*	.	1.1	1.1*	.	.	1.0	.	0.5*	0.7	.	1.1
	CI	[0.6,1.0]	.	[1.0,1.2]	[1.0,1.3]	.	.	[0.7,1.4]	.	[0.4,0.7]	[0.5,1.1]	.	[0.8,1.5]
SES (Ref. High)													
Intermediate	IRR	.	.	1.3*	1.1	.	.	1.7*	.	1.0	1.3	.	1.6*
	CI	.	.	[1.2,1.4]	[1.0,1.2]	.	.	[1.1,2.5]	.	[0.8,1.4]	[0.9,2.0]	.	[1.2,2.2]
Low	IRR	.	.	1.2*	1.1	.	.	2.3*	.	1.3	1.6*	.	1.5*
	CI	.	.	[1.0,1.5]	[0.9,1.3]	.	.	[1.5,3.4]	.	[1.0,1.8]	[1.0,2.5]	.	[1.2,2.2]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

Daily wine drinking quantity (wine drinkers only)

The average wine drinking quantity of pure alcohol among wine drinkers by survey is shown in Figure 2.12. The highest wine drinking quantity was found for Portugal (22.5 g/d), followed by Denmark (11.8/9.0 g/d) and Northern Ireland (8.7 g/d). Lowest quantities were observed in Poland (0.8 g/d), Latvia (1.7 g/d), and Iceland (1.8 g/d).

Figure 2.12. Wine drinking quantity of pure alcohol by survey (grams per day, wine drinkers only)



The average wine drinking quantity ranged from 1.2 g/d (PL_08) to 31.2 g/d (PT_12) among male wine drinkers (Table 2.24). Among female wine drinkers, a narrower range from 0.5 g/d (PL_08) to 10.5 (DK_08) was observed. In most surveys, gender ratios exceeded 1.0 implying higher wine drinking quantities among males. Exceptions were Scotland (gender ratio = 0.9) as well as Iceland and England (gender ratio = 1.0). The largest gender differences were observed in Portugal (gender ratio = 4.2). Eastern and Southern as compared to Northern and Central European countries tended to exhibit greater gender ratios.

Table 2.24. Wine drinking quantity of pure alcohol by gender and survey (grams per day, wine drinkers only)

	Males (M)	Females (M)	Gender Ratio
IS_12	.	.	.
IS_13	1.9	1.8	1.0
NO_12	.	.	.
SE_13	.	.	.

	Males (M)	Females (M)	Gender Ratio
FI_08	2.9	2.2	1.4
LV_11	2.2	1.4	1.5
DK_08	13.4	10.5	1.3
DK_10	10.2	8.0	1.3
DK_13	9.3	7.4	1.3
ENG_13	8.3	8.0	1.0
SCT_13	7.0	7.5	0.9
WLS_13	.	.	.
NIR_10	9.0	8.4	1.1
BE_13	.	.	.
DE_09	6.6	5.7	1.2
DE_12	5.9	5.5	1.1
FR_10	.	.	.
AT_08	.	.	.
PL_08	1.2	0.5	2.6
HU_09	.	.	.
SI_12	3.5	1.3	2.6
HR_11	9.5	2.3	4.2
IT_12	.	.	.
PT_12	31.2	7.2	4.3

M = mean; . = no data available

Table 2.25 illustrates gender, age, and SES relations with wine drinking quantity of pure alcohol among wine drinkers by survey. Being male increased the likelihood for drinking higher quantities of wine in nine surveys (FI_08, LV_11, DK_08, DK_10, DK_13, PL_08, SI_12, HR_11, PT_12), with a maximum effect in Portugal (IRR = 4.2). In most surveys, the oldest age group had an increased rate of drinking higher quantities of wine. The only survey with an inverse effect was Latvia. In five surveys (IS_13, FI_08, ENG_13, SCT_13, DE_09), the low SES groups had a lower rate, while the opposite effect was observed for Slovenia.

Table 2.25. Gender, age, and SES relations with wine drinking quantity of pure alcohol by survey (grams per day, wine drinkers only)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	.	1.0	.	.	1.4*	1.6*	1.3*	1.3*	1.3*	1.0	0.9	.
	CI	.	[0.8,1.3]	.	.	[1.1,1.7]	[1.3,2.0]	[1.2,1.4]	[1.3,1.3]	[1.2,1.3]	[0.9,1.2]	[0.8,1.0]	.
Age (Ref. 18-29 years)													
30-49 years	IRR	.	1.5*	.	.	1.9*	0.8	0.9	1.2*	1.2*	1.7*	1.9*	.
	CI	.	[1.1,2.0]	.	.	[1.5,2.4]	[0.7,1.1]	[0.8,1.1]	[1.2,1.3]	[1.2,1.2]	[1.3,2.2]	[1.6,2.3]	.
50-64 years	IRR	.	2.1*	.	.	2.0*	0.7*	1.3*	1.9*	1.8*	2.1*	2.1*	.
	CI	.	[1.6,2.8]	.	.	[1.6,2.5]	[0.5,1.0]	[1.1,1.5]	[1.8,1.9]	[1.8,1.9]	[1.6,2.7]	[1.7,2.6]	.
SES (Ref. High)													
Intermediate	IRR	.	0.6*	.	.	0.7*	0.7*	0.9	0.9*	0.9*	0.9	0.8*	.
	CI	.	[0.5,0.8]	.	.	[0.6,0.9]	[0.6,0.9]	[0.8,1.0]	[0.9,0.9]	[0.9,1.0]	[0.8,1.2]	[0.7,0.9]	.
Low	IRR	.	0.6*	.	.	0.6*	0.9	0.9	1.0*	1.0*	0.7*	0.7*	.
	CI	.	[0.4,0.8]	.	.	[0.5,0.8]	[0.6,1.3]	[0.8,1.1]	[0.9,1.0]	[0.9,1.0]	[0.6,0.8]	[0.6,0.9]	.

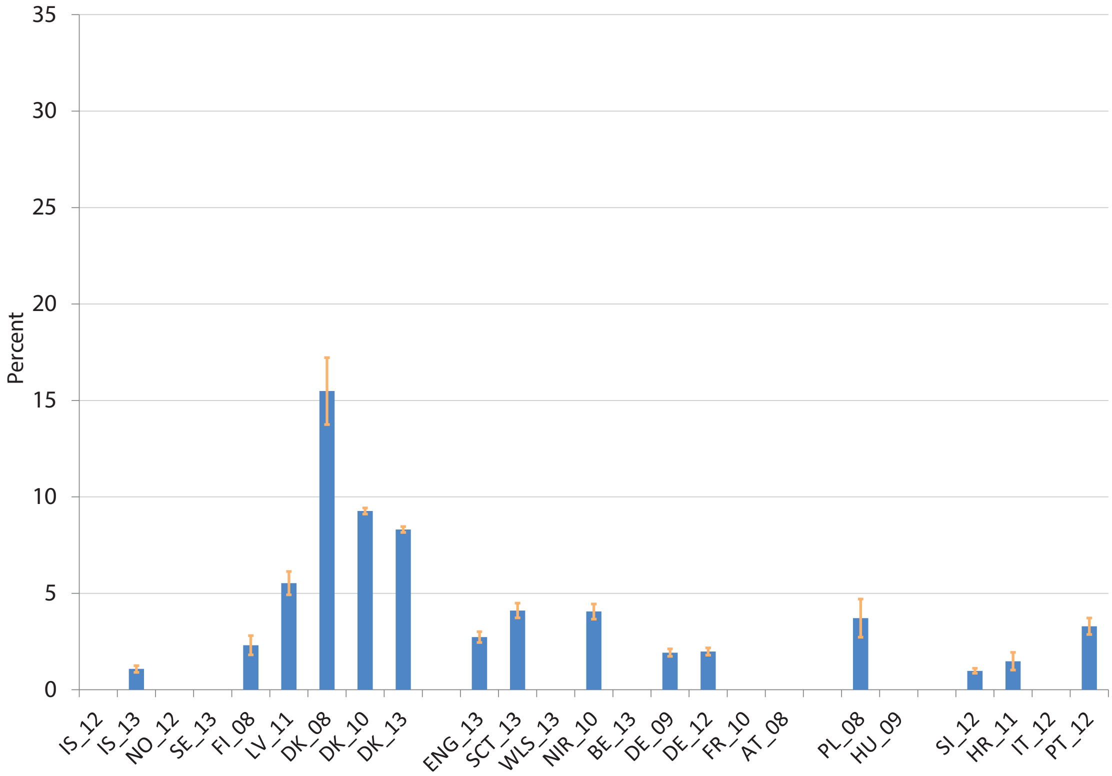
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	1.1	.	1.1	1.0	.	.	2.2*	.	2.5*	4.1*	.	4.2*
	CI	[0.9,1.3]	.	[1.0,1.2]	[1.0,1.1]	.	.	[1.3,3.7]	.	[2.2,2.9]	[2.7,6.2]	.	[3.5,5.1]
Age (Ref. 18-29 years)													
30-49 years	IRR	1.4*	.	1.2*	1.2*	.	.	1.3	.	1.0	1.1	.	2.3*
	CI	[1.0,1.8]	.	[1.1,1.3]	[1.1,1.3]	.	.	[0.7,2.5]	.	[0.9,1.2]	[0.6,2.0]	.	[1.6,3.6]
50-64 years	IRR	1.4*	.	1.5*	1.6*	.	.	2.8*	.	1.5*	1.5	.	2.9*
	CI	[1.1,1.9]	.	[1.4,1.7]	[1.5,1.8]	.	.	[1.3,6.1]	.	[1.3,1.8]	[0.9,2.7]	.	[1.9,4.3]
SES (Ref. High)													
Intermediate	IRR	.	.	0.8*	1.0	.	.	0.8	.	1.1	0.8	.	1.0
	CI	.	.	[0.7,0.9]	[0.9,1.1]	.	.	[0.5,1.5]	.	[0.9,1.2]	[0.5,1.3]	.	[0.8,1.4]
Low	IRR	.	.	0.7*	0.8	.	.	0.6	.	1.4*	0.9	.	1.3
	CI	.	.	[0.6,0.8]	[0.7,1.0]	.	.	[0.3,1.3]	.	[1.1,1.7]	[0.6,1.5]	.	[1.0,1.7]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

Daily spirits drinking quantity (spirits drinkers only)

Figure 2.13 shows the average spirits drinking quantity of pure alcohol among spirits drinkers by survey. The highest quantities were observed in Denmark (15.5/9.3/8.3 g/d), Latvia (5.5 g/d), and Scotland (4.1 g/d), and the lowest quantities were observed in Hungary (1.0 g/d), Iceland (1.1 g/d), and Croatia (1.5 g/d).

Figure 2.13. Spirits drinking quantity of pure alcohol by survey (grams per day, spirits drinkers only)



Among males, the mean quantity ranged from 1.1 g/d in Slovenia to 17.2 g/d in Denmark (Table 2.26). Among females, it ranged from 0.6 g/d in Iceland, Finland, and Croatia to 13.3 g/d in Denmark. Without exception, gender ratios above 1.0 implied higher spirits drinking quantities among males. Gender ratios ranged from 1.3 in Denmark to 6.6 in Finland.

Table 2.26. Spirits drinking quantity of pure alcohol by gender and survey (grams per day, spirits drinkers only)

	Males (M)	Females (M)	Gender Ratio
IS_12	.	.	.
IS_13	1.5	0.6	2.5
NO_12	.	.	.
SE_13	.	.	.
FI_08	3.9	0.6	6.6

	Males (M)	Females (M)	Gender Ratio
LV_11	8.4	1.7	4.9
DK_08	17.2	13.3	1.3
DK_10	10.3	7.9	1.3
DK_13	9.4	7.0	1.3
ENG_13	3.1	2.3	1.4
SCT_13	4.8	3.4	1.4
WLS_13	.	.	.
NIR_10	4.8	3.3	1.5
BE_13	.	.	.
DE_09	2.4	1.1	2.2
DE_12	2.4	1.3	1.9
FR_10	.	.	.
AT_08	.	.	.
PL_08	5.4	0.9	5.8
HU_09	.	.	.
SI_12	1.1	0.8	1.5
HR_11	2.1	0.6	3.5
IT_12	.	.	.
PT_12	4.4	1.1	4.0

M = mean; . = no data available

Gender, age, and SES relations with spirits drinking quantity of pure alcohol among spirits drinkers by survey are shown in Table 2.27. In all surveys, males had an increased likelihood for drinking higher quantities of spirits, with a maximum effect in Finland (IRR = 5.5). In eight surveys (IS_13, DK_08, DK_10, DK_13, ENG_13, DE_09, DE_12, SI_12), the oldest age group had a lower rate of drinking higher spirits quantities. The only survey with an opposite effect was FI_08. With the exception of IS_13, FI_08, HR_11, and PT_12, a low SES increased the rate of higher spirits drinking quantities.

Table 2.27. Gender, age, and SES relations with spirits drinking quantity of pure alcohol by survey (grams per day, spirits drinkers only)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	.	2.6*	.	.	5.5*	4.6*	1.3*	1.4*	1.4*	1.3*	1.4*	.
	CI	.	[1.9,3.6]	.	.	[3.9,7.8]	[3.8,5.7]	[1.0,1.6]	[1.4,1.5]	[1.4,1.5]	[1.1,1.6]	[1.2,1.6]	.
Age (Ref. 18-29 years)													
30-49 years	IRR	.	0.6*	.	.	1.2	1.1	0.5*	0.6*	0.6*	0.6*	0.7*	.
	CI	.	[0.4,0.8]	.	.	[0.8,1.7]	[0.9,1.4]	[0.4,0.7]	[0.5,0.6]	[0.6,0.6]	[0.5,0.7]	[0.5,0.8]	.
50-64 years	IRR	.	0.6*	.	.	1.5*	1.0	0.4*	0.6*	0.7*	0.7*	1.1	.
	CI	.	[0.4,0.9]	.	.	[1.1,2.2]	[0.8,1.3]	[0.3,0.5]	[0.5,0.6]	[0.6,0.7]	[0.6,0.9]	[0.9,1.3]	.
SES (Ref. High)													
Intermediate	IRR	.	1.2	.	.	1.1	2.0*	1.2	1.3*	1.2*	1.3*	1.6*	.
	CI	.	[0.8,1.7]	.	.	[0.5,2.2]	[1.7,2.5]	[0.9,1.5]	[1.3,1.4]	[1.1,1.2]	[1.1,1.6]	[1.3,1.9]	.
Low	IRR	.	1.0	.	.	1.9	2.7*	1.6*	1.5*	1.4*	2.1*	2.0*	.
	CI	.	[0.7,1.6]	.	.	[0.9,3.8]	[2.0,3.6]	[1.2,2.1]	[1.5,1.6]	[1.3,1.5]	[1.5,2.9]	[1.6,2.5]	.

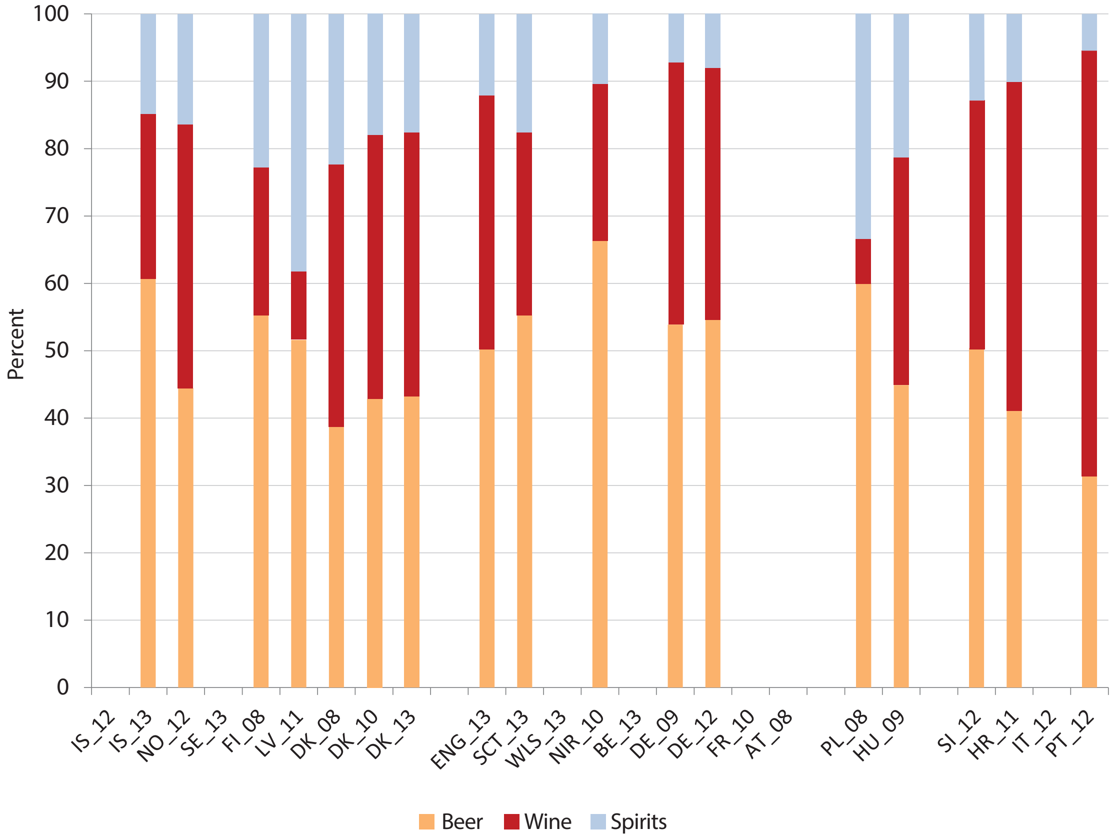
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	1.4*	.	2.3*	1.9*	.	.	5.0*	.	1.5*	3.7*	.	3.8*
	CI	[1.2,1.8]	.	[1.9,2.9]	[1.6,2.3]	.	.	[3.5,7.2]	.	[1.2,1.9]	[2.2,6.1]	.	[3.1,4.7]
Age (Ref. 18-29 years)													
30-49 years	IRR	0.8*	.	0.7*	0.7*	.	.	1.1	.	0.4*	0.4*	.	1.0
	CI	[0.6,1.0]	.	[0.5,0.9]	[0.6,0.8]	.	.	[0.6,2.0]	.	[0.3,0.5]	[0.2,0.8]	.	[0.8,1.3]
50-64 years	IRR	0.8	.	0.8*	0.7*	.	.	0.9	.	0.6*	0.7	.	1.0
	CI	[0.6,1.0]	.	[0.6,1.0]	[0.6,0.9]	.	.	[0.5,1.7]	.	[0.4,0.9]	[0.4,1.2]	.	[0.7,1.4]
SES (Ref. High)													
Intermediate	IRR	.	.	1.5*	1.3*	.	.	1.3	.	1.4*	0.6	.	1.2
	CI	.	.	[1.2,2.0]	[1.1,1.6]	.	.	[0.8,2.1]	.	[1.1,1.7]	[0.3,1.5]	.	[0.9,1.5]
Low	IRR	.	.	1.9*	1.9*	.	.	1.7*	.	2.4*	0.8	.	1.2
	CI	.	.	[1.3,2.7]	[1.2,2.9]	.	.	[1.0,2.9]	.	[1.5,3.8]	[0.3,1.9]	.	[1.0,1.6]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = $p < 0.05$; . = no data available

Drinking quantity by beverage type

The share of the three beverages beer, wine and spirits in total consumption by survey is summarized in Figure 2.14. For this analysis, other national beverages were not considered. Beer is the dominant beverage in all surveys but DK_08, HR_11 and PT_12, where wine dominates. The largest share of beer was observed in NIR_10 (66.7%), IS_13 (60.9%) and PL_08 (60.2%). The contribution of wine was largest in PT_12 (63.3%), HR_11 (49.4%) and DK_10 (39.9%). Surveys with the largest share of spirits were LV_11 (37.9%), PL_08 (33.1%) and FI_08 (22.6%).

Figure 2.14. Drinking quantity by beverage type (percentage of total alcohol consumption)



Episodic heavy drinking (EHD) and drunkenness

12-months prevalence of episodic heavy drinking (EHD) (total population)

Figure 2.15 illustrates the 12-months prevalence of EHD (see 'Methods' for details on definition) by survey. A decreasing tendency from Northern European countries towards Southern and Eastern Europe could be observed. Prevalence ranged from 12.9% (PT_12) to 80.5% (DK_08).

Figure 2.15. 12-months prevalence of episodic heavy drinking by survey (total population)

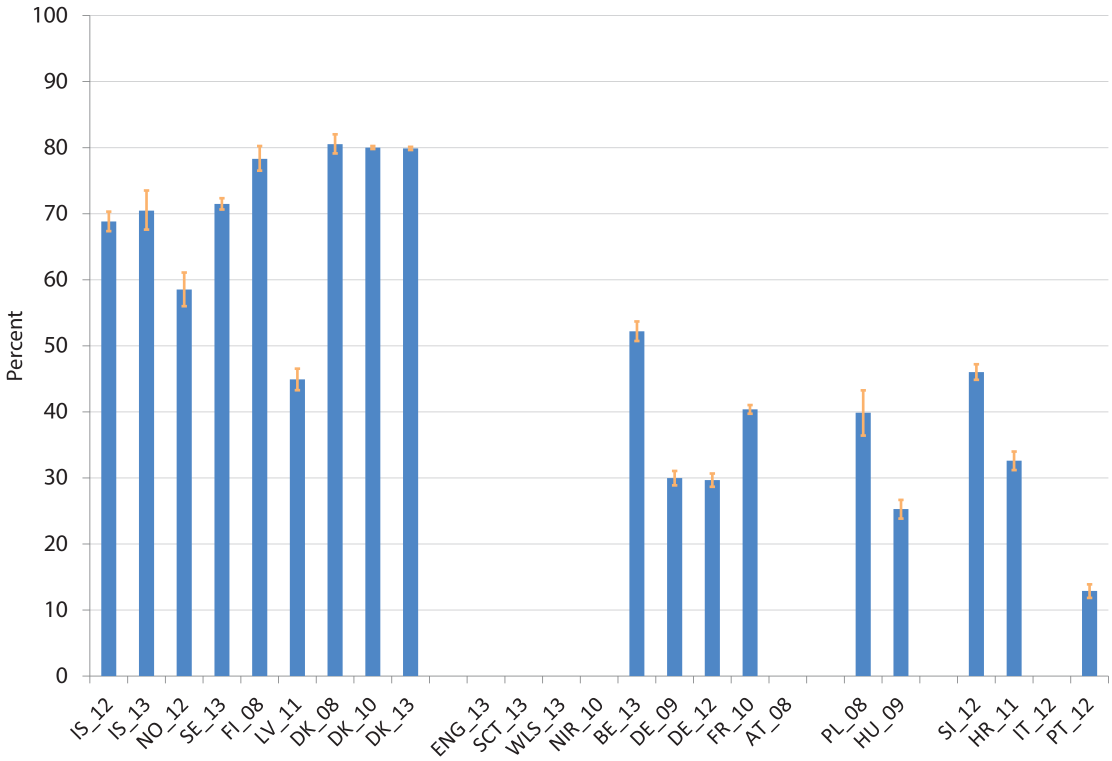


Table 2.28 displays the 12-months prevalence of EHD by gender and survey. Among males, prevalence rates ranged from 25.2% (PT_12) to 87.3% (DK_10), while an even broader range was observed among females, from 1.1% (PT_12) to 77.9% (FI_08). Gender ratios exceeded 1.0, implying lower rates among females as compared to males in almost all surveys. Gender ratios tended to increase from Northern to Central, Eastern, and Southern European countries. The largest gender differences were observed for PT_12 (gender ratio = 23.3), while no gender differences were found for LV_11 (gender ratio = 1.0).

Table 2.28. 12-months prevalence of episodic heavy drinking by gender and survey (total population)

	Males (%)	Females (%)	Gender Ratio
IS_12	77.6	59.8	1.3
IS_13	76.0	64.8	1.2
NO_12	71.7	44.9	1.6
SE_13	81.0	61.7	1.3

	Males (%)	Females (%)	Gender Ratio
FI_08	78.6	77.9	1.0
LV_11	64.4	26.9	2.4
DK_08	86.6	74.3	1.2
DK_10	87.3	72.7	1.2
DK_13	86.9	72.8	1.2
ENG_13	.	.	.
SCT_13	.	.	.
WLS_13	.	.	.
NIR_10	.	.	.
BE_13	64.5	40.1	1.6
DE_09	42.8	16.7	2.6
DE_12	40.6	18.5	2.2
FR_10	56.9	24.3	2.3
AT_08	.	.	.
PL_08	61.9	18.4	3.4
HU_09	36.7	14.1	2.6
SI_12	55.9	35.6	1.6
HR_11	47.5	17.7	2.7
IT_12	.	.	.
PT_12	25.2	1.1	23.3

% = percent; . = no data available

Gender, age, and SES relations with 12-months prevalence of EHD by survey are illustrated in Table 2.29. With the exception of Finland, males had an increased likelihood in all surveys. The effects tended to be stronger in Central, Eastern, and Southern as compared to Northern European countries. Without exception, the rate of EHD decreased with age. In most surveys, low SES was associated with a lower rate of EHD. The only case showing a significant inverse effect was Latvia.

Table 2.29. Gender, age, and SES relations with 12-months prevalence of episodic heavy drinking by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	OR	2.5*	1.8*	3.4*	2.7*	1.2	4.8*	2.3*	2.7*	2.6*	.	.	.
	CI	[2.1,2.9]	[1.3,2.5]	[2.7,4.3]	[2.4,2.9]	[0.9,1.4]	[4.1,5.5]	[1.8,2.8]	[2.6,2.8]	[2.5,2.7]	.	.	.
Age (Ref. 18-29)													
30-49	OR	0.4*	0.7	0.5*	0.7*	1.0	1.1	0.5*	0.6*	0.6*	.	.	.
	CI	[0.3,0.6]	[0.4,1.1]	[0.4,0.7]	[0.6,0.8]	[0.7,1.3]	[0.9,1.3]	[0.4,0.6]	[0.5,0.6]	[0.5,0.6]	.	.	.
50-64	OR	0.2*	0.4*	0.3*	0.5*	0.7*	0.7*	0.3*	0.4*	0.4*	.	.	.
	CI	[0.2,0.3]	[0.2,0.7]	[0.2,0.3]	[0.4,0.6]	[0.5,0.9]	[0.6,0.8]	[0.2,0.4]	[0.4,0.4]	[0.4,0.4]	.	.	.
SES (Ref. High)													
Intermediate	OR	0.8*	0.9	1.0	1.2*	0.8	1.1	0.8	1.0*	0.9*	.	.	.
	CI	[0.7,1.0]	[0.6,1.2]	[0.8,1.3]	[1.1,1.3]	[0.5,1.2]	[0.9,1.4]	[0.7,1.1]	[0.9,1.0]	[0.9,1.0]	.	.	.
Low	OR	0.7*	0.5*	0.7	0.7*	0.4*	1.3*	0.5*	0.6*	0.6*	.	.	.
	CI	[0.6,0.9]	[0.3,0.7]	[0.4,1.1]	[0.6,0.8]	[0.3,0.6]	[1.0,1.7]	[0.4,0.7]	[0.6,0.7]	[0.6,0.7]	.	.	.

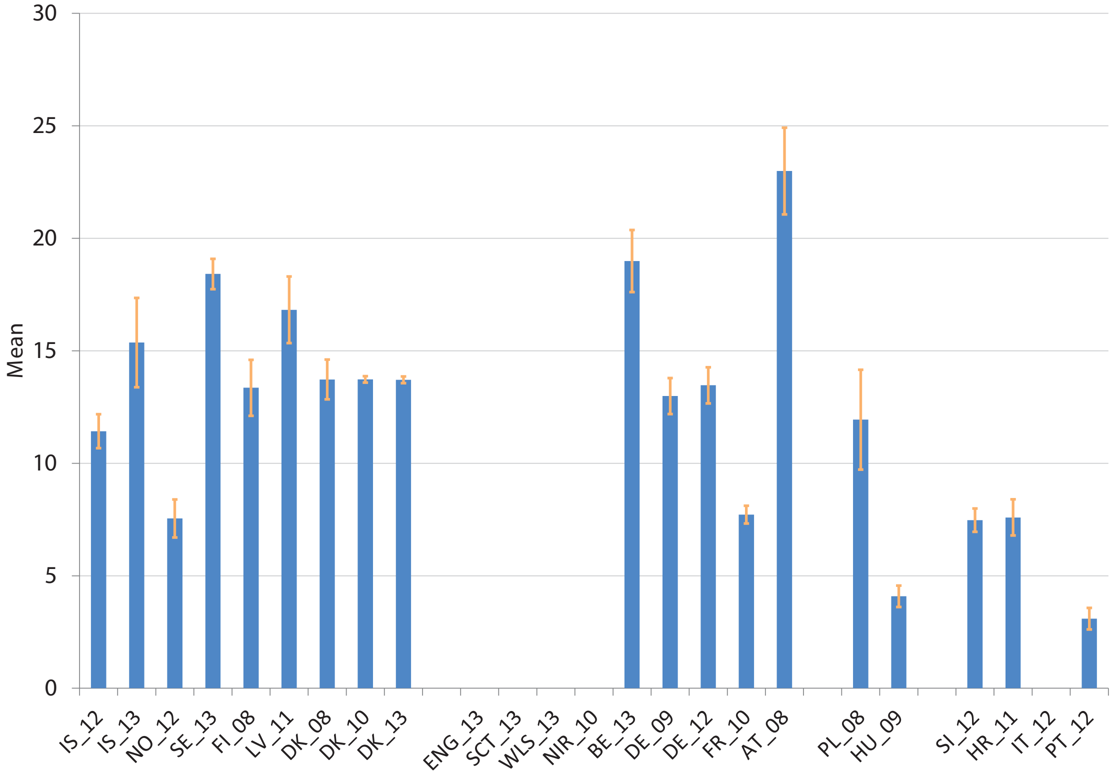
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	OR	.	2.8*	4.1*	3.2*	4.3*	7.7*	3.5*	.	2.4*	4.9*	.	31.2*
	CI	.	[2.5,3.2]	[3.7,4.6]	[2.9,3.5]	[4.1,4.6]	[5.5,10.8]	[3.0,4.1]	.	[2.2,2.7]	[4.2,5.6]	.	[20.9,46.6]
Age (Ref. 18-29)													
30-49	OR	.	0.6*	0.4*	0.4*	0.5*	1.0	0.7*	.	0.4*	0.3*	.	0.6*
	CI	.	[0.5,0.7]	[0.3,0.4]	[0.3,0.4]	[0.5,0.6]	[0.5,1.2]	[0.6,0.9]	.	[0.4,0.5]	[0.2,0.3]	.	[0.4,0.7]
50-64	OR	.	0.5*	0.3*	0.3*	0.3*	0.3*	0.6*	.	0.3*	0.2*	.	0.3*
	CI	.	[0.4,0.6]	[0.3,0.3]	[0.3,0.3]	[0.3,0.4]	[0.2,0.5]	[0.5,0.7]	.	[0.3,0.3]	[0.1,0.2]	.	[0.3,0.5]
SES (Ref. High)													
Intermediate	OR	.	1.2*	1.1	1.0	0.9*	0.9	1.1	.	1.2*	0.9	.	0.9
	CI	.	[1.0,1.4]	[1.0,1.3]	[0.9,1.1]	[0.8,1.0]	[0.6,1.6]	[0.9,1.3]	.	[1.0,1.3]	[0.7,1.1]	.	[0.7,1.2]
Low	OR	.	0.7*	1.0	1.0	0.8*	0.8	0.9	.	0.8*	0.9	.	1.0
	CI	.	[0.6,0.8]	[0.8,1.2]	[0.9,1.2]	[0.8,0.9]	[0.5,1.3]	[0.7,1.2]	.	[0.7,1.0]	[0.7,1.1]	.	[0.8,1.4]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

12-months frequency of episodic heavy drinking (EHD) (total population)

Figure 2.16 displays the average number of EHD days in the past 12 months by survey. Highest EHD frequencies were found for Austria (23.0 days), Belgium (19.0 days), and Sweden (18.4 days), while the lowest were observed in Portugal (3.1 days), Hungary (4.1 days), and Slovenia (7.5 days). Eastern and Southern European countries tended to exhibit lower EHD frequencies as compared to countries from Northern and Central Europe.

Figure 2.16. 12-months frequency of episodic heavy drinking by survey (days per year, total population)



The average number of EHD days in the past 12 months by gender and survey are illustrated in Table 2.30. Among males, the frequency of EHD ranged from 5.8 days (PT_12) to 31.3 days (AT_08), whereas it varied between 0.6 days (PT_12) and 14.4 days (AT_08) among females. Gender ratios showed higher EHD frequencies among males in all surveys with a maximum of 9.9 in Portugal and a minimum of 1.8 in Norway.

Table 2.30. 12-months frequency of episodic heavy drinking by gender and survey (days per year, total population)

	Males (M)	Females (M)	Gender Ratio
IS_12	15.2	7.5	2.0
IS_13	21.4	9.2	2.3
NO_12	9.6	5.4	1.8
SE_13	24.8	11.8	2.1

	Males (M)	Females (M)	Gender Ratio
FI_08	17.3	8.2	2.1
LV_11	30.0	4.7	6.4
DK_08	18.0	9.4	1.9
DK_10	18.3	9.1	2.0
DK_13	18.0	9.4	1.9
ENG_13	.	.	.
SCT_13	.	.	.
WLS_13	.	.	.
NIR_10	.	.	.
BE_13	27.9	10.2	2.8
DE_09	20.1	5.6	3.6
DE_12	20.9	5.9	3.6
FR_10	12.2	3.4	3.6
AT_08	31.3	14.4	2.2
PL_08	21.4	2.7	7.9
HU_09	6.8	1.5	4.7
SI_12	10.3	4.5	2.3
HR_11	12.3	3.9	4.3
IT_12	.	.	.
PT_12	5.8	0.6	9.9

M = mean; . = no data available

Being male increased the odds on higher EHD frequency in all surveys (Table 2.31). The relationship tended to be stronger in Eastern and Southern as compared to Northern and Central European countries, with a maximum effect in Portugal (IRR = 13.4). With the exception of SE_13, FI_08, LV_11, BE_13, and AT_08, older age was associated with a lower rate. In seven surveys (SE-13, LV_11, DK_10, DK_13, BE_13, FR_10, SI_12), the rate of more frequent EHD was increased among people of low SES. For IS_13, the rate was lower for low SES.

Table 2.31. Gender, age, and SES relations with 12-months frequency of episodic heavy drinking by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	2.2*	2.5*	1.9*	2.1*	2.1*	6.0*	2.0*	2.1*	2.0*	.	.	.
	CI	[1.8,2.5]	[1.9,3.3]	[1.5,2.5]	[2.0,2.3]	[1.7,2.6]	[4.8,7.7]	[1.7,2.3]	[2.0,2.1]	[1.9,2.0]	.	.	.
Age (Ref. 18-29)													
30-49	IRR	0.6*	1.1	0.7*	0.7*	1.2	1.1	0.6*	0.6*	0.6*	.	.	.
	CI	[0.5,0.7]	[0.8,1.5]	[0.5,0.9]	[0.7,0.8]	[1.0,1.4]	[0.8,1.4]	[0.5,0.7]	[0.6,0.6]	[0.6,0.7]	.	.	.
50-64	IRR	0.6*	0.7*	0.5*	0.9	1.1	0.8	0.6*	0.7*	0.8*	.	.	.
	CI	[0.5,0.8]	[0.5,1.0]	[0.4,0.7]	[0.9,1.0]	[0.9,1.4]	[0.6,1.0]	[0.5,0.8]	[0.7,0.7]	[0.7,0.8]	.	.	.
SES (Ref. High)													
Intermediate	IRR	1.0	0.8	1.3	1.2*	1.3*	1.5*	0.9	1.1*	1.0	.	.	.
	CI	[0.8,1.2]	[0.6,1.0]	[1.0,1.7]	[1.1,1.3]	[1.0,1.8]	[1.1,2.1]	[0.8,1.1]	[1.1,1.1]	[1.0,1.0]	.	.	.
Low	IRR	1.0	0.7*	0.8	1.2*	1.3	2.1*	1.1	1.2*	1.2*	.	.	.
	CI	[0.8,1.3]	[0.5,01.0]	[0.6,1.2]	[1.1,1.4]	[1.0,1.7]	[1.5,3.0]	[0.9,1.4]	[1.2,1.3]	[1.1,1.2]	.	.	.

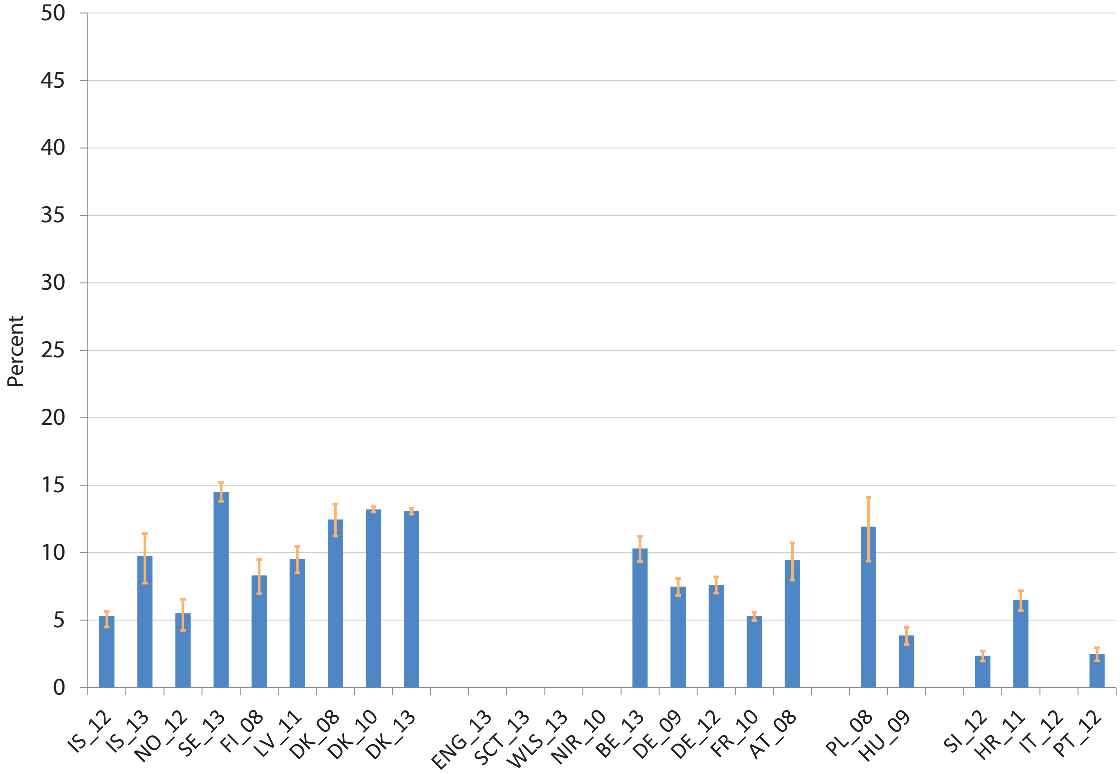
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	.	2.8*	4.1*	3.9*	3.7*	2.2*	8.5*	4.7*	2.4*	5.7*	.	13.4*
	CI	.	[2.4,3.2]	[3.4,4.8]	[3.3,4.5]	[3.3,4.1]	[1.8,2.8]	[5.1,14.1]	[3.8,5.9]	[2.1,2.8]	[4.1,7.8]	.	[8.3,21.6]
Age (Ref. 18-29)													
30-49	IRR	.	0.6*	0.6*	0.6*	0.6*	0.9	0.7	0.7*	0.5*	0.3*	.	0.6*
	CI	.	[0.6,0.8]	[0.5,0.7]	[0.5,0.7]	[0.5,0.6]	[0.7,1.1]	[0.4,1.1]	[0.6,1.0]	[0.4,0.6]	[0.2,0.4]	.	[0.3,0.9]
50-64	IRR	.	0.9	0.5*	0.6*	0.5*	0.9	0.4*	0.7*	0.4*	0.3*	.	0.3*
	CI	.	[0.7,1.1]	[0.4,0.6]	[0.5,0.8]	[0.4,0.5]	[0.7,1.2]	[0.3,0.7]	[0.5,0.9]	[0.4,0.5]	[0.2,0.4]	.	[0.1,0.4]
SES (Ref. High)													
Intermediate	IRR	.	1.5*	1.3*	1.2	1.1	1.0	0.8	1.2	1.3*	1.0	.	0.8
	CI	.	[1.3,1.7]	[1.1,1.6]	[1.0,1.4]	[0.9,1.2]	[0.7,1.5]	[0.5,1.5]	[1.0,1.6]	[1.1,1.6]	[0.7,1.5]	.	[0.5,1.4]
Low	IRR	.	1.4*	1.3	1.2	1.4*	1.0	1.1	1.4	1.4*	1.3	.	1.2
	CI	.	[1.1,1.7]	[1.0,1.7]	[1.0,1.6]	[1.2,1.6]	[0.7,1.4]	[0.5,2.2]	[1.0,2.0]	[1.1,1.7]	[0.9,1.9]	.	[0.7,2.2]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

12-months prevalence of weekly episodic heavy drinking (EHD) (total population)

The 12-months prevalence of weekly EHD by survey is displayed in Figure 2.17. The highest prevalence was observed for Sweden (14.5%), Denmark (12.5/13.2/13.1%), and Poland (11.9%), the lowest for Slovenia (2.4%), Portugal (2.5%), and Hungary (3.9%). Apart from Poland, Eastern and Southern European countries tended to exhibit lower prevalence of weekly EHD.

Figure 2.17. 12-months prevalence of weekly episodic heavy drinking by survey (total population)



Proportions of weekly EHD among males ranged from 3.6% in Portugal to 21.9% in Poland (Table 2.32). Among women, the range was between 0.5% in Portugal and 8.6% in Sweden. Without exception, gender ratios were ab0ve 1.0, implying higher proportions of weekly EHD drinkers among males. The largest gender differences were found for Portugal (gender ratio = 10.4) and Poland (gender ratio = 10.1), smallest for Norway and Austria (gender ratio = 2.4).

Table 2.32. 12-months prevalence of weekly episodic heavy drinking by gender and survey (total population)

	Males (%)	Females (%)	Gender Ratio
IS_12	7.6	3.0	2.5
IS_13	15.5	3.9	4.0
NO_12	7.7	3.2	2.4
SE_13	20.2	8.6	2.3

	Males (%)	Females (%)	Gender Ratio
FI_08	11.9	3.5	3.4
LV_11	17.1	2.5	6.8
DK_08	18.8	5.9	3.2
DK_10	19.3	7.0	2.7
DK_13	18.6	7.5	2.5
ENG_13	.	.	.
SCT_13	.	.	.
WLS_13	.	.	.
NIR_10	.	.	.
BE_13	16.0	4.7	3.4
DE_09	11.7	3.1	3.7
DE_12	12.2	2.9	4.2
FR_10	8.7	1.9	4.5
AT_08	13.2	5.5	2.4
PL_08	21.9	2.2	10.1
HU_09	6.9	1.0	7.2
SI_12	3.6	1.1	3.2
HR_11	10.2	2.7	3.8
IT_12	.	.	.
PT_12	4.7	0.5	10.4

% = percent; . = no data available

In all surveys, being male increased the likelihood of being a weekly EHD drinker (Table 2.33). The greatest effect was found for Poland (OR = 12.4), the smallest for Iceland and Norway (OR = 2.6). In most surveys, the oldest age group showed a lower rate of weekly EHD, a higher rate was found for Sweden only. No age effect was observed for IS_12, IS_13, FI_08, LV_11, AT_08, HU_09. With the exception of IS_12, IS_13, NO_12, DK_08, DE_12, AT_08, and PL_08, a low SES increased the rate of weekly EHD. A lower rate in the low SES group could be observed for IS_13 only.

Table 2.33. Gender, age, and SES relations with 12-months prevalence of weekly episodic heavy drinking by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	OR	2.6*	5.1*	2.6*	2.7*	3.7*	7.3*	4.1*	3.3*	2.9*	.	.	.
	CI	[1.8,3.7]	[3.1,8.4]	[1.6,4.3]	[2.7,3.0]	[2.4,5.6]	[5.4,10.0]	[3.2,5.3]	[3.1,3.4]	[2.8,3.0]	.	.	.
Age (Ref. 18-29)													
30-49	OR	0.7	1.3	0.5*	0.8*	1.2	1.3*	0.3*	0.3*	0.4*	.	.	.
	CI	[0.4,1.1]	[0.7,2.4]	[0.3,0.8]	[0.7,0.9]	[0.8,1.9]	[1.0,1.8]	[0.2,0.3]	[0.3,0.3]	[0.3,0.4]	.	.	.
50-64	OR	1.3	1.2	0.3*	1.2*	1.5	1.3	0.3*	0.4*	0.5*	.	.	.
	CI	[0.8,1.9]	[0.6,2.4]	[0.2,0.6]	[1.0,1.4]	[0.9,2.4]	[0.9,1.7]	[0.2,0.4]	[0.4,0.4]	[0.5,0.5]	.	.	.
SES (Ref. High)													
Intermediate	OR	1.1	0.7	1.1	1.3*	2.2*	1.7*	0.7*	1.1*	1.0*	.	.	.
	CI	[0.8,1.6]	[0.4,1.1]	[0.7,1.8]	[1.2,1.5]	[1.1,4.3]	[1.1,2.6]	[0.5,1.0]	[1.1,1.2]	[0.9,1.0]	.	.	.
Low	OR	0.9	0.5*	1.0	1.2*	2.0*	2.6*	1.1	1.5*	1.4*	.	.	.
	CI	[0.6,1.3]	[0.3,1.0]	[0.4,2.4]	[1.0,1.5]	[1.0,3.9]	[1.6,4.2]	[0.8,1.5]	[1.5,1.6]	[1.3,1.4]	.	.	.

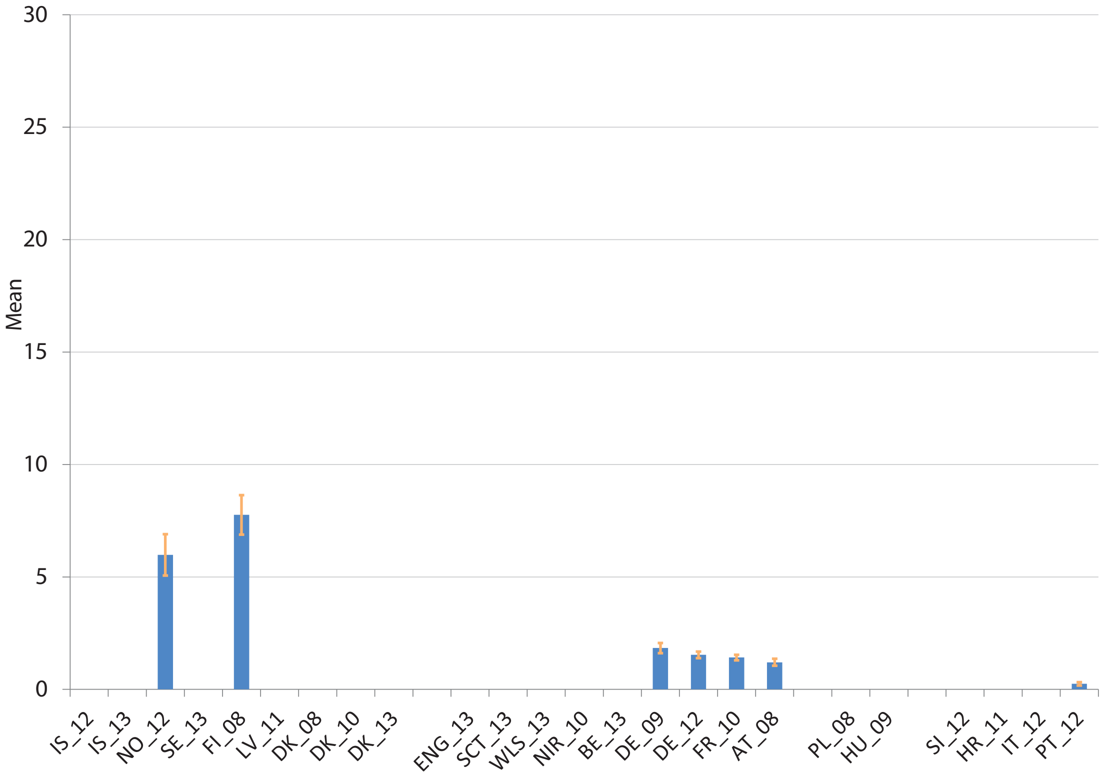
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	OR	.	3.8*	4.4*	4.7*	4.8*	2.7*	12.4*	7.6*	3.2*	4.0*	.	10.6*
	CI	.	[3.0,4.8]	[3.6,5.4]	[3.9,5.7]	[4.1,5.6]	[1.9,3.9]	[6.0,25.7]	[4.6,12.6]	[2.2,4.6]	[3.1,5.3]	.	[5.8,19.7]
Age (Ref. 18-29)													
30-49	OR	.	0.5*	0.6*	0.7*	0.4*	0.9	0.8	1.0	0.4*	0.3*	.	0.9
	CI	.	[0.4,0.6]	[0.5,0.7]	[0.5,0.8]	[0.3,0.5]	[0.7,1.3]	[0.5,1.5]	[0.7,1.6]	[0.3,0.5]	[0.2,0.4]	.	[0.5,1.5]
50-64	OR	.	0.6*	0.6*	0.7*	0.3*	1.1	0.5*	1.1	0.4*	0.3*	.	0.6*
	CI	.	[0.5,0.8]	[0.5,0.8]	[0.6,0.9]	[0.2,0.3]	[0.7,1.6]	[0.3,1.0]	[0.7,1.8]	[0.3,0.7]	[0.2,0.4]	.	[0.3,1.0]
SES (Ref. High)													
Intermediate	OR	.	1.6*	1.7*	1.2	1.1	0.6	2.1	1.7	1.3	1.4	.	1.6
	CI	.	[1.3,2.1]	[1.4,2.2]	[0.9,1.4]	[0.9,1.4]	[0.3,1.1]	[0.9,4.8]	[0.9,3.0]	[0.7,2.4]	[0.9,2.2]	.	[0.7,3.5]
Low	OR	.	1.4*	1.9*	1.1	1.5*	0.8	2.0	2.2*	2.4*	1.6*	.	2.5*
	CI	.	[1.0,1.8]	[1.4,2.6]	[0.8,1.5]	[1.2,1.8]	[0.5,1.3]	[0.9,4.5]	[1.2,4.3]	[1.3,4.3]	[1.0,2.6]	.	[1.3,5.1]

OR = odds ratio; CI = 95% confidence interval; Ref. = reference group; * = $p < 0.05$; . = no data available

12-months frequency of subjective drunkenness (total population)

Figure 2.18 shows the average number of days with subjectively rated drunkenness in the past 12 months. Frequency was highest in the two Nordic countries Finland (7.8 days) and Norway (6.0 days), as compared to lowest values in France (1.4 days), Austria (1.2 days), and Portugal (0.25 days).

Figure 2.18. 12-months frequency of subjective drunkenness by survey (days per year, total population)



The 12-months frequency of subjective drunkenness by gender and survey is illustrated in Table 2.34. Among males, frequencies ranged from 0.5 days in Portugal to 11.9 days in Finland, whereas values between 0.1 days in Portugal and 4.3 in Norway were observed among females. In all surveys, gender ratios exceeded 1.0. The largest gender differences were observed in Portugal (gender ratio = 8.9).

Table 2.34. 12-months frequency of subjective drunkenness by gender and survey (days per year, total population)

	Males (M)	Females (M)	Gender Ratio
IS_12	.	.	.
IS_13	.	.	.
NO_12	7.7	4.3	1.8
SE_13	.	.	.
FI_08	11.9	3.5	3.4

	Males (M)	Females (M)	Gender Ratio
LV_11	.	.	.
DK_08	.	.	.
DK_10	.	.	.
DK_13	.	.	.
ENG_13	.	.	.
SCT_13	.	.	.
WLS_13	.	.	.
NIR_10	.	.	.
BE_13	.	.	.
DE_09	2.6	1.0	2.7
DE_12	2.3	0.8	3.1
FR_10	2.4	0.5	4.8
AT_08	1.6	0.8	2.1
PL_08	.	.	.
HU_09	.	.	.
SI_12	.	.	.
HR_11	.	.	.
IT_12	.	.	.
PT_12	0.5	0.1	8.9

M = mean; . = no data available

Gender, age, and SES relations with 12-months frequency of subjective drunkenness by survey are displayed in Table 2.35. Male gender was associated with an increased likelihood ~~risk~~ of higher frequency of drunkenness in all surveys, with a maximum effect of OR = 19.4 in Portugal. Older age groups showed lower rates in all surveys, while low SES was associated with a decreased rate of higher frequency of drunkenness in Portugal only.

Table 2.35. Gender, age, and SES relations with 12-months frequency of subjective drunkenness by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	IRR	.	.	1.8*	.	3.4*	.	.	.	.	.	.	.
	CI	.	.	[1.3,2.6]	.	[2.6,4.5]	.	.	.	.	.	.	.
Age (Ref. 18-29)													
30-49	IRR	.	.	0.5*	.	0.6*	.	.	.	.	.	.	.
	CI	.	.	[0.4,0.7]	.	[0.5,0.7]	.	.	.	.	.	.	.
50-64	IRR	.	.	0.4*	.	0.4*	.	.	.	.	.	.	.
	CI	.	.	[0.2,0.7]	.	[0.3,0.6]	.	.	.	.	.	.	.
SES (Ref. High)													
Intermediate	IRR	.	.	1.3	.	1.0	.	.	.	.	.	.	.
	CI	.	.	[0.8,1.9]	.	[0.7,1.5]	.	.	.	.	.	.	.
Low	IRR	.	.	1.3	.	1.4	.	.	.	.	.	.	.
	CI	.	.	[0.7,2.1]	.	[1.0,2.2]	.	.	.	.	.	.	.

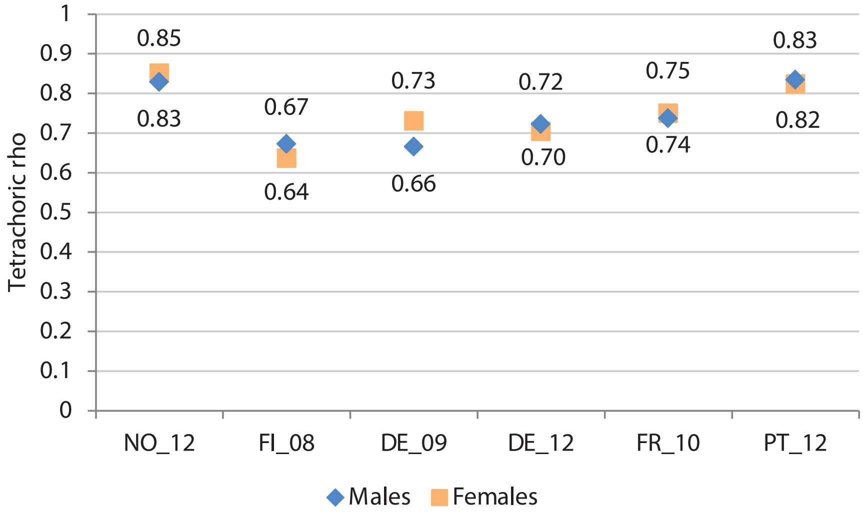
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	IRR	.	.	3.4*	3.8*	6.3*	2.1*	.	.	.	.	.	19.4*
	CI	.	.	[2.6,4.5]	[2.9,5.0]	[4.9,8.0]	[1.3,3.2]	.	.	.	.	.	[10.6,35.4]
Age (Ref. 18-29)													
30-49	IRR	.	.	0.4*	0.4*	0.2*	0.4*	.	.	.	.	.	0.3*
	CI	.	.	[0.3,0.5]	[0.4,0.5]	[0.2,0.3]	[0.3,0.6]	.	.	.	.	.	[0.2,0.5]
50-64	IRR	.	.	0.1*	0.2*	0.1*	0.2*	.	.	.	.	.	0.2*
	CI	.	.	[0.1,0.2]	[0.1,0.3]	[0.1,0.1]	[0.1,0.3]	.	.	.	.	.	[0.1,0.4]
SES (Ref. High)													
Intermediate	IRR	.	.	1.2	1.2	0.8	0.7	.	.	.	.	.	0.4*
	CI	.	.	[0.9,1.7]	[0.9,1.6]	[0.6,1.2]	[0.4,1.3]	.	.	.	.	.	[0.2,0.7]
Low	IRR	.	.	1.4	1.5	0.8	1.0	.	.	.	.	.	0.4*
	CI	.	.	[0.8,2.3]	[0.9,2.7]	[0.5,1.1]	[0.6,1.9]	.	.	.	.	.	[0.2,0.8]

IRR = incidence rate ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

Association between EHD and drunkenness

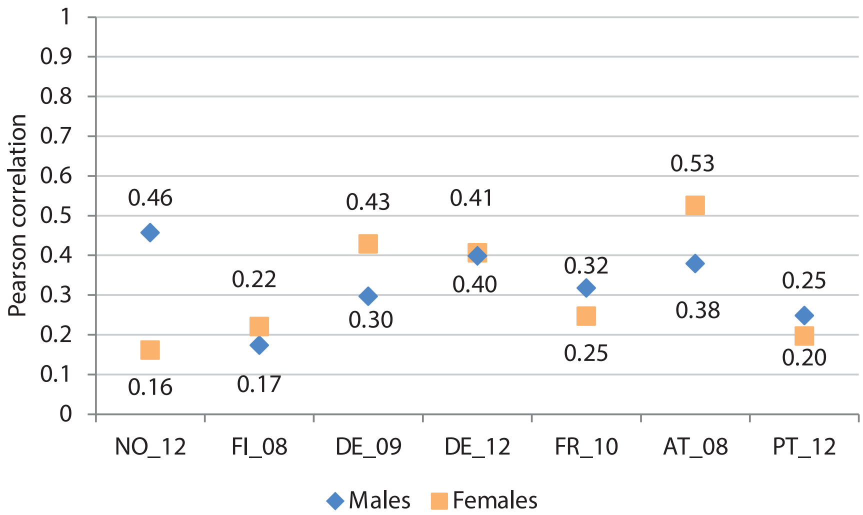
The association between 12-months prevalence of EHD and drunkenness could be calculated for six surveys with available information on both indicators (Figure 2.19). The correlations were moderate to high ranging from 0.64 among females in Finland to 0.85 among females in Norway. There were no differences in the level of association between men and women.

Figure 2.19. Individual-level correlations between prevalence of EHD and drunkenness



The correlations between 12-months frequency of EHD and drunkenness were low to moderate, varying between 0.16 among females in Norway and 0.53 among females in Austria (Figure 2.20). In Norway, the correlation was higher among males than females, whereas the opposite was true in Germany (2009) and Austria.

Figure 2.20. Individual-level correlations between frequency of EHD and drunkenness



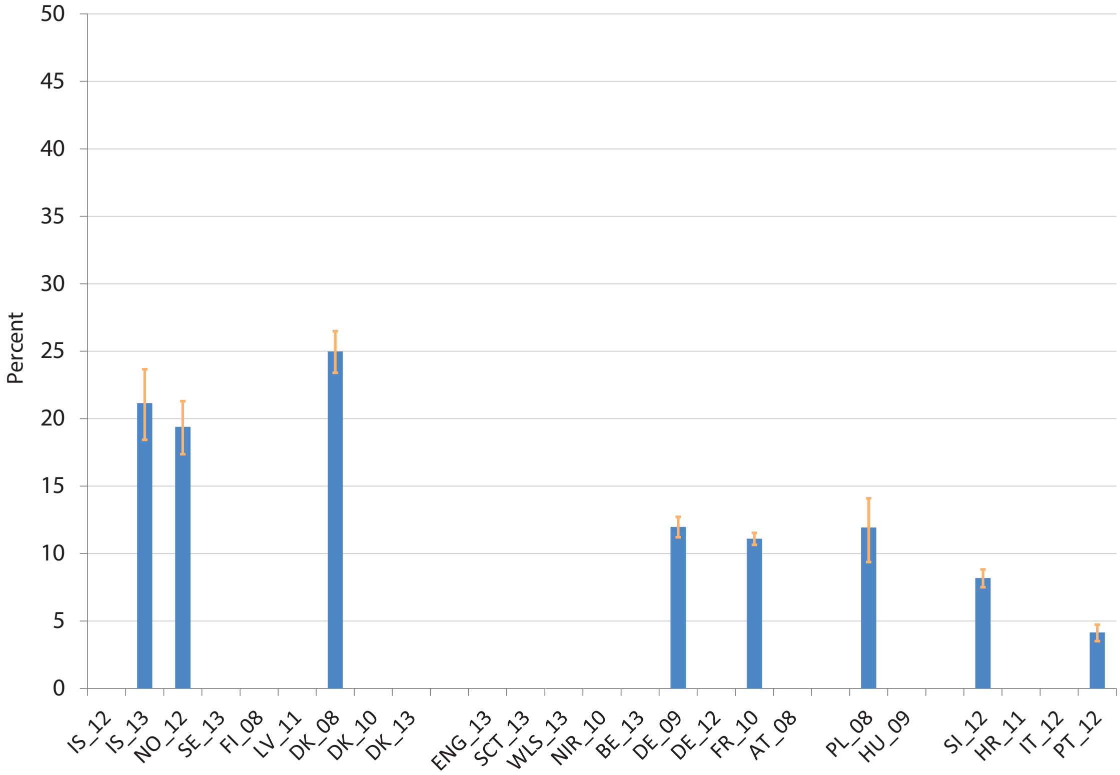
B2.3 Alcohol-related harm

Alcohol use disorders identification test (AUDIT)

12-months prevalence of problematic alcohol use (AUDIT) (total population)

The proportion of people with problematic alcohol use in the past 12 months, measured by the AUDIT, by survey is shown in Figure 2.21. Highest prevalence was observed in Denmark (25.0%), Iceland (21.2%), and Norway (19.4%), lowest in Portugal (4.2%), Slovenia (8.2%), and France (11.1%). Problematic alcohol use tended to be more prevalent in Northern as compared to Central, Eastern, and Southern European countries.

Figure 2.21. 12-months prevalence of problematic alcohol use (AUDIT) by survey (total population)



The prevalence of problematic alcohol use ranged from 8.0% (PT_12) to 33.9% (DK_08) among males, and from 0.5% (PT_12) to 15.9% (DK_08) among females (Table 2.36). In all surveys, gender ratios were above 1.0. The largest gender difference was observed in PT_12 (gender ratio = 16.2), the lowest in IS_13 (gender ratio = 1.9).

Table 2.36. 12-months prevalence of problematic alcohol use (AUDIT) by gender and survey (total population)

	Males (%)	Females (%)	Gender Ratio
IS_12	.	.	.
IS_13	27.8	14.4	1.9
NO_12	26.8	11.6	2.3
SE_13	.	.	.
FI_08	.	.	.
LV_11	.	.	.
DK_08	33.9	15.9	2.1
DK_10	.	.	.
DK_13	.	.	.
ENG_13	.	.	.
SCT_13	.	.	.
WLS_13	.	.	.
NIR_10	.	.	.
BE_13	.	.	.
DE_09	18.6	5.2	3.6
DE_12	.	.	.
FR_10	18.0	4.4	4.1
AT_08	.	.	.
PL_08	21.8	2.2	9.7
HU_09	.	.	.
SI_12	12.7	3.5	3.7
HR_11	.	.	.
IT_12	.	.	.
PT_12	8.0	0.5	16.2

% = percent; . = no data available

Gender, age, and SES relations with 12-months prevalence of problematic alcohol use by survey are illustrated in Table 2.37. Being male was associated with an increased likelihood in all surveys, with a maximum effect in Portugal (OR = 17.4). With the exception of PT_12, the oldest age group had a decreased rate of problematic alcohol use. In Iceland, low SES was associated with a lower rate, while in two other surveys (FR_10, PT_12) the effect was in the opposite direction.

Table 2.37. Gender, age, and SES relations with 12-months prevalence of problematic alcohol use (AUDIT) by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	OR	.	2.5*	3.0*	.	.	.	3.1*	.	.	.	.	.
	CI	.	[1.8,3.4]	[2.3,4.0]	.	.	.	[2.6,3.8]	.	.	.	.	.
Age (Ref. 18-29)													
30-49	OR	.	0.4*	0.3*	.	.	.	0.3*	.	.	.	.	.
	CI	.	[0.3,0.7]	[0.2,0.4]	.	.	.	[0.2,0.3]	.	.	.	.	.
50-64	OR	.	0.3*	0.2*	.	.	.	0.2*	.	.	.	.	.
	CI	.	[0.2,0.5]	[0.1,0.3]	.	.	.	[0.1,0.2]	.	.	.	.	.
SES (Ref. High)													
Intermediate	OR	.	0.9	1.4*	.	.	.	0.8	.	.	.	.	.
	CI	.	[0.7,1.4]	[1.1,1.9]	.	.	.	[0.7,1.0]	.	.	.	.	.
Low	OR	.	0.5*	1.4	.	.	.	1.1	.	.	.	.	.
	CI	.	[0.3,0.9]	[0.9,2.3]	.	.	.	[0.8,1.4]	.	.	.	.	.

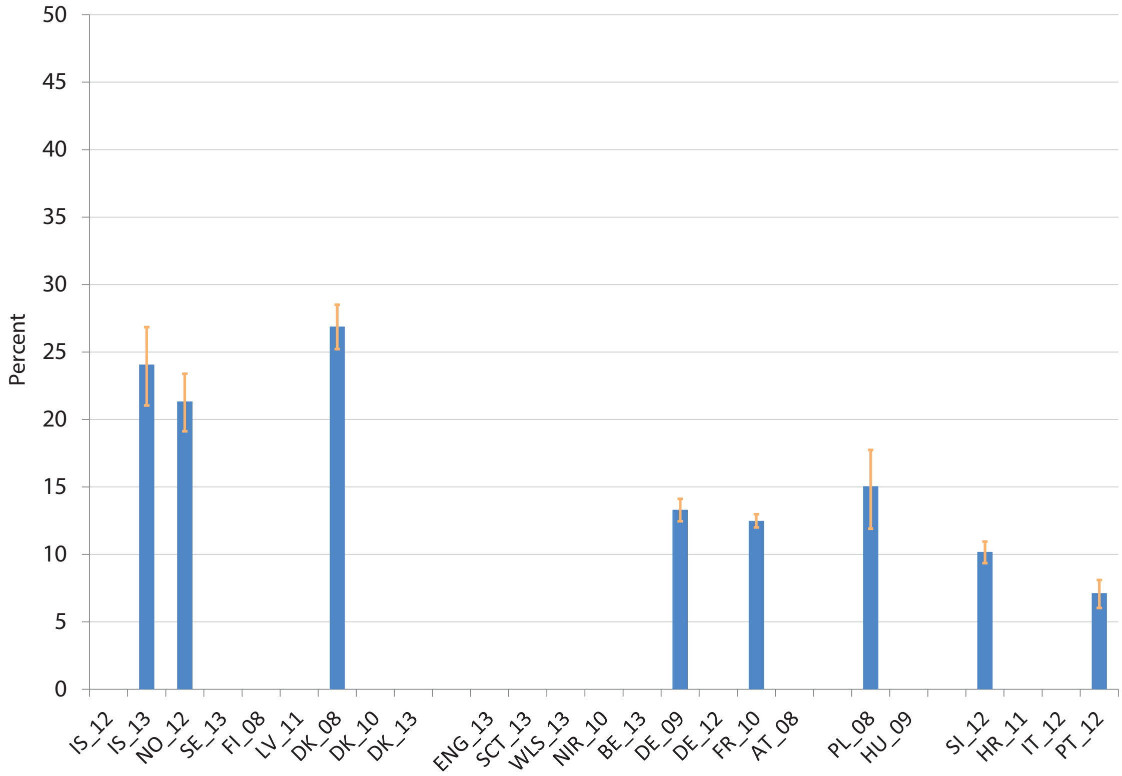
		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	OR	.	.	4.3*	.	4.8*	.	11.9*	.	4.1*	.	.	17.4*
	CI	.	.	[3.7,5.1]	.	[4.4,5.4]	.	[5.8,24.4]	.	[3.4,5.0]	.	.	[9.9,30.5]
Age (Ref. 18-29)													
30-49	OR	.	.	0.4*	.	0.4*	.	1.0	.	0.3*	.	.	1.7*
	CI	.	.	[0.4,0.5]	.	[0.4,0.5]	.	[0.4,1.3]	.	[0.2,0.3]	.	.	[1.0,2.7]
50-64	OR	.	.	0.3*	.	0.4*	.	0.4*	.	0.2*	.	.	1.1
	CI	.	.	[0.3,0.4]	.	[0.3,0.4]	.	[0.2,0.8]	.	[0.2,0.3]	.	.	[0.7,1.9]
SES (Ref. High)													
Intermediate	OR	.	.	1.0	.	1.0	.	2.0	.	1.1	.	.	2.1*
	CI	.	.	[0.9,1.2]	.	[0.9,1.2]	.	[0.9,4.8]	.	[0.8,1.5]	.	.	[1.1,4.0]
Low	OR	.	.	1.0	.	1.3*	.	2.1	.	1.3	.	.	2.8*
	CI	.	.	[0.8,1.2]	.	[1.1,1.4]	.	[0.9,4.8]	.	[1.0,1.8]	.	.	[1.5,5.1]

OR = odds ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

12-months prevalence of problematic alcohol use (AUDIT) (drinkers only)

The 12-months prevalence of problematic alcohol use among drinkers by survey is illustrated in Figure 2.22. Highest prevalence was observed in Denmark (26.9%), Iceland (24.1%), and Norway (21.3%), lowest in Portugal (7.1%), Slovenia (10.2%), and France (12.5%).

Figure 2.22. 12-months prevalence of problematic alcohol use (AUDIT) by survey (drinkers only)



Among male drinkers, the prevalence of problematic alcohol use ranged from 10.9% (PT_12) to 35.9% (DK_08) (Table 2.38). A range between 1.1% (PT_12) and 17.4% (DK_08) was observed among females. In all surveys, gender ratios exceeded 1.0. The largest gender difference was observed in PT_12 (gender ratio = 9.7), the lowest in IS_13 (gender ratio = 1.9).

Table 2.38. 12-months prevalence of problematic alcohol use (AUDIT) by gender and survey (drinkers only)

	Males (%)	Females (%)	Gender Ratio
IS_12	.	.	.
IS_13	31.7	16.3	1.9
NO_12	28.8	13.1	2.2
SE_13	.	.	.
FI_08	.	.	.

	Males (%)	Females (%)	Gender Ratio
LV_11	.	.	.
DK_08	35.9	17.4	2.1
DK_10	.	.	.
DK_13	.	.	.
ENG_13	.	.	.
SCT_13	.	.	.
WLS_13	.	.	.
NIR_10	.	.	.
BE_13	.	.	.
DE_09	20.3	5.9	3.5.
DE_12	.	.	.
FR_10	19.6	5.1	3.9
AT_08	.	.	.
PL_08	25.2	3.1	8.1
HU_09	.	.	.
SI_12	15.0	4.6	3.3
HR_11	.	.	.
IT_12	.	.	.
PT_12	10.9	1.1	9.7

% = percent; . = no data available

Gender, age, and SES relations with 12-months prevalence of problematic alcohol use among drinkers by survey are displayed in Table 2.39. Being male was associated with an increased likelihood of alcohol-related problems in the past 12 months in all surveys, with a maximum value in Portugal and Poland (OR = 10.2). With the exception of PT_12, the oldest age group had a decreased rate of problematic alcohol use in all surveys. In France, Slovenia, and Portugal, the rate for problematic alcohol use was increased among the lowest SES group.

Table 2.39. Gender, age, and SES relations with 12-months prevalence of problematic alcohol use (AUDIT) by survey (drinkers only)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Gender (Ref. Female)													
Male	OR	.	2.5*	2.9*	.	.	.	3.1*	.	.	.	.	.
	CI	.	[1.8,3.5]	[2.2,3.9]	.	.	.	[2.6,3.8]	.	.	.	.	.
Age (Ref. 18-29)													
30-49	OR	.	0.4*	0.2*	.	.	.	0.2*	.	.	.	.	.
	CI	.	[0.3,0.6]	[0.2,0.4]	.	.	.	[0.2,0.3]	.	.	.	.	.
50-64	OR	.	0.3*	0.2*	.	.	.	0.2*	.	.	.	.	.
	CI	.	[0.2,0.4]	[0.1,0.3]	.	.	.	[0.1,0.2]	.	.	.	.	.
SES (Ref. High)													
Intermediate	OR	.	1.0	1.5*	.	.	.	0.8	.	.	.	.	.
	CI	.	[0.7,1.4]	[1.1,2.0]	.	.	.	[0.7,1.0]	.	.	.	.	.
Low	OR	.	0.6	1.5	.	.	.	1.3	.	.	.	.	.
	CI	.	[0.4,1.0]	[0.9,2.5]	.	.	.	[1.0,1.7]	.	.	.	.	.

		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Gender (Ref. Female)													
Male	OR	.	.	4.3*	.	4.5*	.	10.2*	.	3.8*	.	.	10.2*
	CI	.	.	[3.6,5.0]	.	[4.1,5.0]	.	[4.9,21.1]	.	[3.1,4.7]	.	.	[5.8,17.9]
Age (Ref. 18-29)													
30-49	OR	.	.	0.4*	.	0.4*	.	0.7	.	0.3*	.	.	1.7*
	CI	.	.	[0.4,0.5]	.	[0.4,0.5]	.	[0.4,1.2]	.	[0.2,0.3]	.	.	[1.0,2.7]
50-64	OR	.	.	0.4*	.	0.3*	.	0.4*	.	0.2*	.	.	1.1
	CI	.	.	[0.3,0.4]	.	[0.3,0.4]	.	[0.2,0.9]	.	[0.1,0.3]	.	.	[0.7,1.8]
SES (Ref. High)													
Intermediate	OR	.	.	1.1	.	1.0	.	2.1	.	1.1	.	.	2.2*
	CI	.	.	[0.9,1.3]	.	[0.9,1.2]	.	[0.9,4.9]	.	[0.9,1.5]	.	.	[1.1,4.2]
Low	OR	.	.	1.2	.	1.4*	.	2.3	.	1.6*	.	.	2.9*
	CI	.	.	[0.9,1.5]	.	[1.2,1.6]	.	[1.0,5.3]	.	[1.2,2.2]	.	.	[1.6,5.3]

OR = odds ratio; CI = 95% confidence interval; Ref. = reference group; * = p < 0.05; . = no data available

Further results on single indicators

12-months prevalence of acute problems (total population)

The 12-months prevalence of acute alcohol-related problems (physical fight, injuries, blackout, physically hazardous situations, guilt) by survey is illustrated in Table 2.40. The proportion of people having been involved in a physical fight due to alcohol in past 12 months was highest in Latvia (8.5%) and Finland (4.4%) and lowest in Portugal (0.2%) and Slovenia (0.4%). The 12-months prevalence of alcohol-related injuries ranged from 0.7% in Slovenia to 8.9% in Iceland. The highest proportion of people with a blackout after drinking was observed for Denmark (23.8%), the lowest in Portugal (4.1%). The percentage of people having been in physically hazardous situations due to alcohol in past 12 months was highest in Germany (5.3%) and lowest in Sweden (0.6%). Feelings of guilt after drinking were observed for 2.9% in Portugal and 29.9% in Iceland.

12-months prevalence of chronic problems (total population)

Table 2.41 shows the 12-months prevalence of chronic alcohol-related problems (role failure, impaired control, morning drinking, legal problems, social problems, financial problems, others concerned, health problems, alcohol use despite health problems, annoyed by being criticized, wish to cut down by survey) by survey. Apart from some exceptions, there was a tendency of higher percentages of people indicating chronic problems due to alcohol in Northern and Central as compared to Eastern and Southern European countries. For instance, the proportion of people having experienced role failure due to alcohol in past 12 months (e.g. failed to do what was normally expected from you) ranged from 2.2% in Poland to 16.5% in Denmark. In addition, impaired control over drinking (i.e. failed to stop drinking once started) was most prevalent in Northern countries such as Sweden (21.0%), Latvia (20.6%) and Denmark (18.1%).

Table 2.40. 12-months prevalence of acute problems by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Physical fight	%	.	.	.	.	4.4	8.5	.	.	.	.	.	.
	CI	.	.	.	.	[3.6,5.3]	[7.6,9.5]	.	.	.	.	.	.
Injuries	%	.	8.9	1.9	.	5.0	.	1.9	.	.	.	.	.
	CI	.	[7.3,10.9]	[1.4,2.7]	.	[4.1,5.9]	.	[1.5,2.5]	.	.	.	.	.
Blackout	%	.	12.5	.	.	.	.	23.8	.	.	.	.	.
	CI	.	[10.4,15.0]	.	.	.	.	[22.3,25.4]	.	.	.	.	.
Physically hazardous situ-ations	%	.	.	.	0.6	2.7	.	.	.	.	.	.	.
	CI	.	.	.	[0.5,0.8]	[2.1,3.4]	.	.	.	.	.	.	.
Guilt	%	.	29.9	19.7	.	.	.	22.0	6.2	6.1	.	.	.
	CI	.	[27.1,32.9]	[17.8,21.8]	.	.	.	[20.5,23.5]	[6.0,6.3]	[6.0,6.3]	.	.	.

		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Physical fight	%	.	.	.	.	.	.	.	.	0.4	.	.	0.2
	CI	.	.	.	.	.	.	.	.	[0.3,0.6]	.	.	[0.1,0.3]
Injuries	%	.	.	2.1	.	1.2	.	2.3	.	0.7	.	.	0.9
	CI	.	.	[1.9,2.4]	.	[1.1,1.4]	.	[1.4,3.7]	.	[0.6,1.0]	.	.	[0.7,1.3]
Blackout	%	.	.	9.9	.	5.9	.	3.8	.	9.0	.	.	4.1
	CI	.	.	[9.2,10.5]	.	[5.6,6.3]	.	[2.6,5.5]	.	[8.3,9.7]	.	.	[3.4,5.0]
Physically hazardous situ-ations	%	.	.	.	5.3	.	.	4.1	.	.	.	.	.
	CI	.	.	.	[4.8,5.8]	.	.	[2.8,5.8]	.	.	.	.	.
Guilt	%	.	.	11.0	.	8.2	.	3.8	.	9.5	.	.	2.9
	CI	.	.	[10.3,11.8]	.	[7.8,8.6]	.	[2.6,5.3]	.	[8.9,10.3]	.	.	[2.4,3.7]

% = percent; CI = 95% confidence interval; . = no data available

Table 2.41. 12-months prevalence of chronic problems by survey (total population)

		IS_12	IS_13	NO_12	SE_13	FI_08	LV_11	DK_08	DK_10	DK_13	ENG_13	SCT_13	WLS_13
Role failure	%	.	12.1	12.0	1.7	9.6	10.4	16.5	.	.	.	.	.
	CI	.	[10.2,14.3]	[10.4,13.7]	[1.5,2.0]	[8.5,10.9]	[9.4,11.5]	[15.2,17.9]	.	.	.	.	.
Impaired control	%	.	10.7	10.2	21.0	.	20.6	18.1	.	.	.	.	.
	CI	.	[8.9,12.9]	[8.7,11.8]	[20.2,21.8]	.	[19.2,21.9]	[16.7,19.6]	.	.	.	.	.
Morning drinking	%	.	5.4	5.9	.	.	.	4.1	.	.	.	.	.
	CI	.	[4.1,7.0]	[4.8,7.1]	.	.	.	[3.4,4.9]	.	.	.	.	.
Legal problems	%	.	.	.	0.5	.	6.9	.	.	.	.	.	.
	CI	.	.	.	[0.4,0.7]	.	[6.0,7.8]	.	.	.	.	.	.
Social problems	%	.	.	.	2.8	8.8	15.9	.	.	.	.	.	.
	CI	.	.	.	[2.5,3.1]	[7.7,10.0]	[14.7,17.2]	.	.	.	.	.	.
Financial problems	%	.	.	.	.	2.4	.	.	.	.	.	.	.
	CI	.	.	.	.	[1.8,3.1]	.	.	.	.	.	.	.
Others concerned	%	.	8.5	1.5	.	.	.	3.7	.	.	.	.	.
	CI	.	[7.0,10.4]	[1.0,2.2]	.	.	.	[3.1,4.5]	.	.	.	.	.
Health problems	%	.	.	.	.	3.5	6.4	.	.	.	.	.	.
	CI	.	.	.	.	[2.9,4.4]	[5.6,7.3]	.	.	.	.	.	.
Use despite health problems	%	.	.	.	8.3	.	.	.	.	.	.	.	.
	CI	.	.	.	[7.7,8.8]	.	.	.	.	.	.	.	.
Annoyed by being criticized	%	.	.	.	.	.	.	.	5.4	5.1	.	.	.
	CI	.	.	.	.	.	.	.	[5.2,5.5]	[5.0,5.3]	.	.	.
Wish to cut down	%	.	.	.	3.8	.	.	.	12.7	12.6	.	.	.
	CI	.	.	.	[3.5,4.2]	.	.	.	[12.5,12.9]	[12.4,12.8]	.	.	.

% = percent; CI = 95% confidence interval; . = no data available

		NIR_10	BE_13	DE_09	DE_12	FR_10	AT_08	PL_08	HU_09	SI_12	HR_11	IT_12	PT_12
Role failure	%	.	.	3.2	3.1	5.8	.	2.2	.	6.7	.	.	2.4
	CI	.	.	[2.9,3.6]	[2.8,3.5]	[5.5,6.1]	.	[1.4,3.4]	.	[6.1,7.3]	.	.	[1.9,3.1]
Impaired control	%	.	.	8.5	7.0	7.1	.	3.5	.	7.6	.	.	4.2
	CI	.	.	[7.9,9.2]	[6.5,7.6]	[6.7,7.4]	.	[2.4,5.1]	.	[7.02,8.3]	.	.	[3.5,5.1]
Morning drinking	%	.	.	0.5	.	0.9	.	3.7	.	1.1	.	.	2.7
	CI	.	.	[0.4,0.7]	.	[0.8,1.1]	.	[2.6,5.3]	.	[0.9,1.4]	.	.	[2.1,3.4]
Legal problems	%	.	.	.	1.3	.	.	.	.	0.6	.	.	0.2
	CI	.	.	.	[1.0,1.5]	.	.	.	.	[0.4,0.8]	.	.	[0.1,0.4]
Social problems	%	.	.	.	5.7	2.5	.	.	.	12.4	.	.	.
	CI	.	.	.	[5.2,6.3]	[2.2,3.0]	.	.	.	[11.6,13.2]	.	.	.
Financial problems	%	.	.	.	.	.	.	.	.	8.2	.	.	.
	CI	.	.	.	.	.	.	.	.	[7.6,8.9]	.	.	.
Others concerned	%	.	.	4.2	.	2.3	.	1.2	.	1.6	9.6	.	0.6
	CI	.	.	[3.7,4.7]	.	[2.1,2.6]	.	[0.6,2.1]	.	[1.3,1.9]	[8.6,10.6]	.	[0.4,0.9]
Health problems	%	.	.	.	5.2	.	.	.	.	9.1	.	.	0.3
	CI	.	.	.	[4.7,5.7]	.	.	.	.	[8.5,9.8]	.	.	[0.2,0.5]
Use despite health problems	%	.	.	.	1.0	.	.	.	.	.	.	.	0.4
	CI	.	.	.	[0.8,1.3]	.	.	.	.	.	.	.	[0.2,0.6]
Annoyed by being criticized	%	.	.	.	.	.	.	.	.	.	.	.	1.2
	CI	.	.	.	.	.	.	.	.	.	.	.	[0.9,1.6]
Wish to cut down	%	.	.	.	.	.	.	.	.	.	.	.	1.6
	CI	.	.	.	.	.	.	.	.	.	.	.	[1.3,2.1]

% = percent; CI = 95% confidence interval; . = no data available

Association between consumption and harm

The individual-level correlations between 12-months drinking frequency and AUDIT diagnoses are depicted in Figure 2.23 for those eight surveys for which information on both was available. In all countries, the correlation coefficients were low to moderate, ranging from 0.16 among females in Portugal to 0.49 among males in Poland. In Denmark, Poland and Portugal, the association was higher for males than females, whereas no gender differences were observed in Iceland, Norway, Germany, France and Slovenia.

Figure 2.23. Individual-level correlations between drinking frequency and AUDIT diagnosis

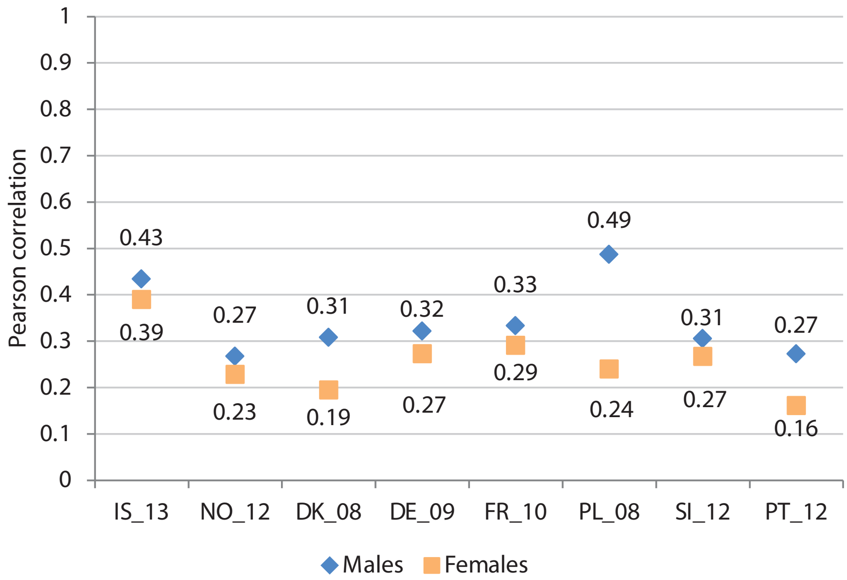
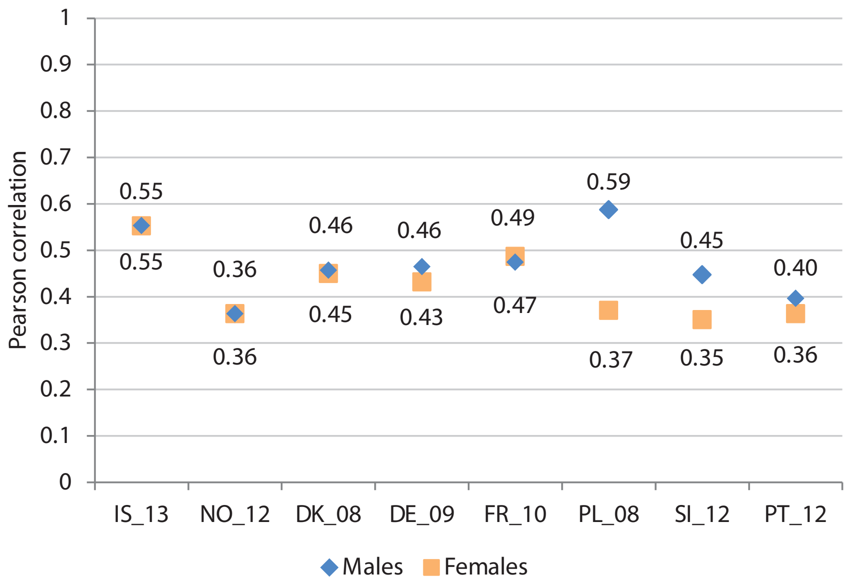


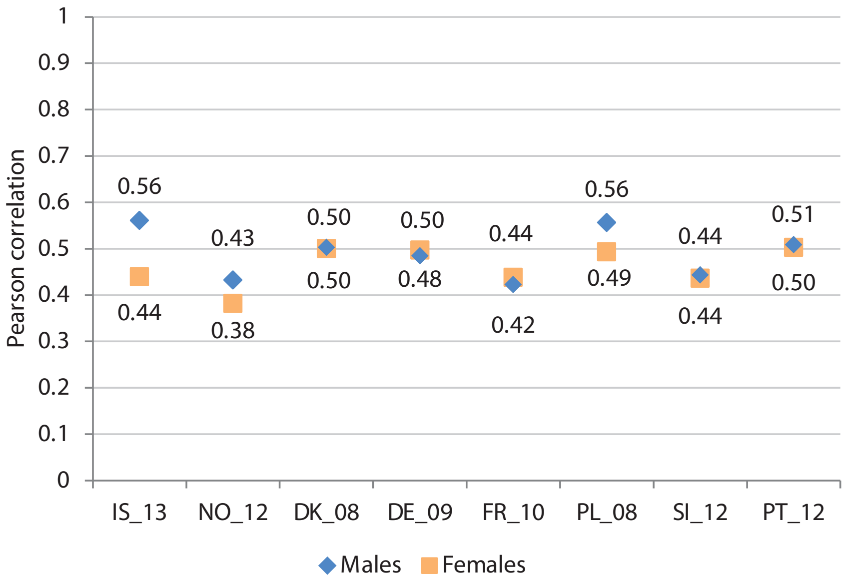
Figure 2.24 shows the associations between drinking quantity and AUDIT diagnoses. In all countries, the correlations were moderate, with a range between 0.35 among females in Slovenia and 0.59 among males in Poland. In most countries, there were no gender differences. However, in Poland and to a lesser extent in Slovenia, the association was stronger for males.

Figure 2.24. Individual-level correlations between drinking quantity and AUDIT diagnosis



Moderate correlation coefficients could also be observed for 12-months frequency of EHD and AUDIT diagnoses (Figure 2.25). Females in Norway showed the lowest correlation with 0.38 and males in Iceland and Poland showed the highest correlation with 0.56. With the exception of Iceland, where the association was stronger for males than for females, there were no gender differences.

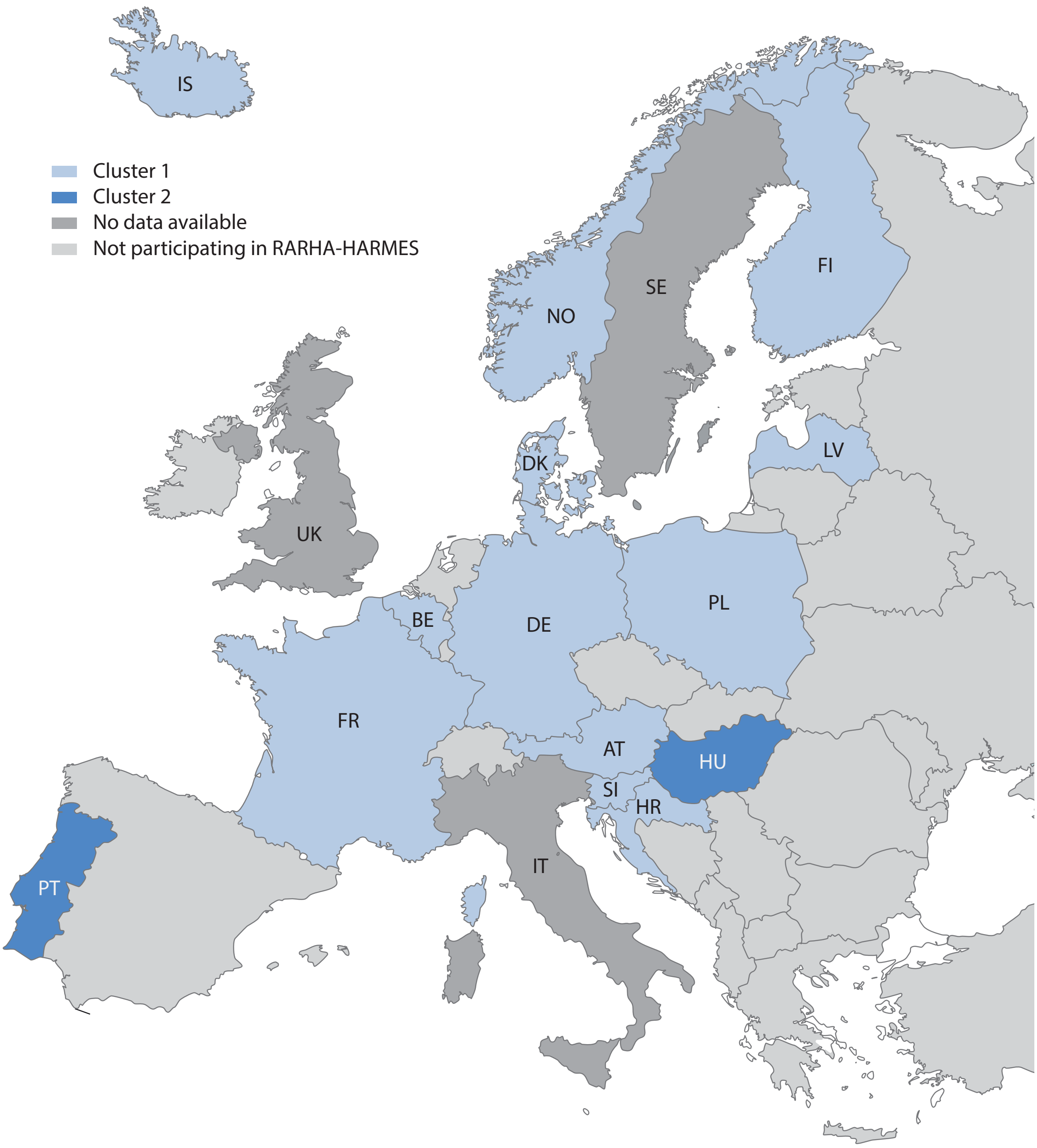
Figure 2.25. Individual-level correlations between EHD frequency and AUDIT diagnosis



B2.4 Clusters of countries based on consumption measures

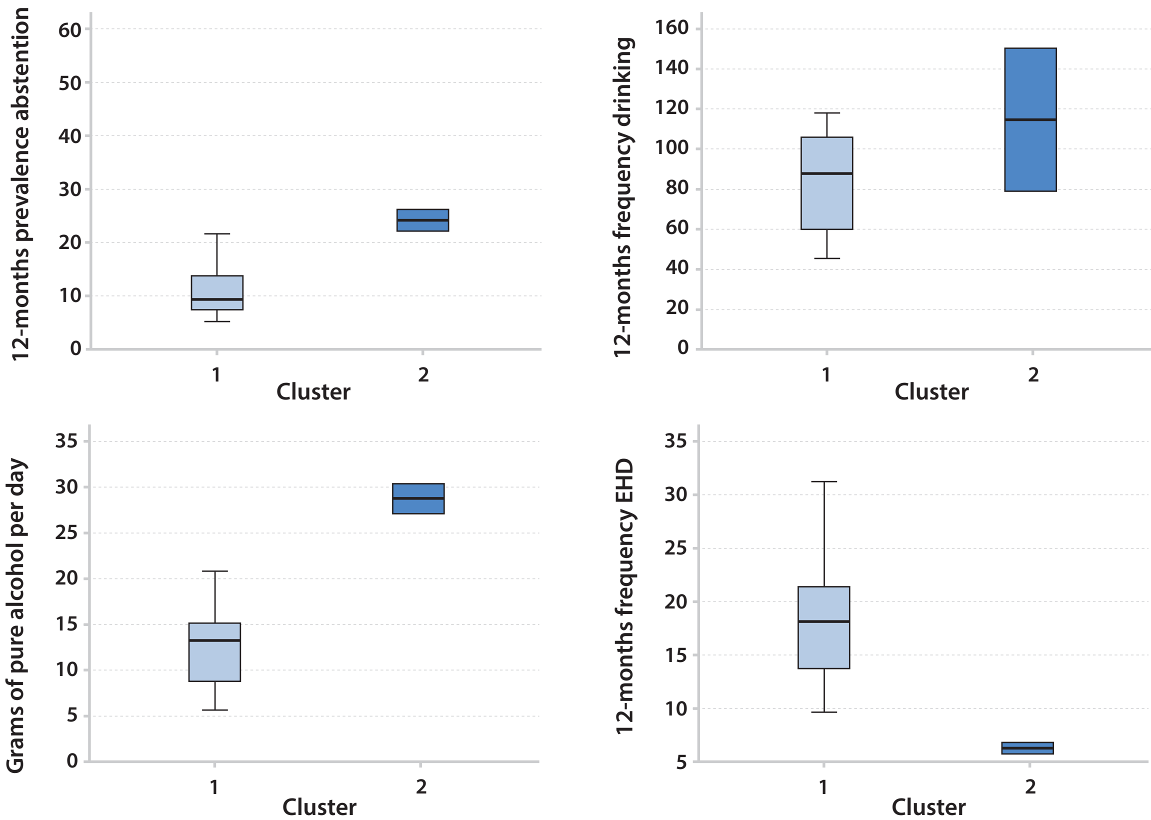
Hierarchical cluster analyses were conducted stratified by gender in order to identify homogenous groups of surveys based on alcohol consumption measures. For males, the analysis resulted in two clusters (Figure 2.26). The first cluster comprised a total of 16 surveys from Austria, Belgium, Croatia, Denmark, Finland, France, Germany, Iceland, Latvia, Norway, Poland and Slovenia. The second cluster comprised two surveys from Hungary and Portugal.

Figure 2.26. Results of cluster analysis, males



The distribution of the consumption variables used for the clustering is shown for both identified groups in Figure 2.27. The 12-months prevalence of abstention in cluster 1 was less than half the value in cluster 2 (M = 10.79; SD = 1.18 vs. M = 24.19; SD = 2.02). The frequency of drinking in the last year was not statistically different in the two groups (M = 85.52; SD = 6.17 vs. M = 114.74; SD = 35.56). Cluster 1 showed a lower consumption volume assessed as grams of pure alcohol per day (M = 12.74; SD = 1.08 vs. M = 28.77; SD = 1.64), whereas 12-months frequency of EHD was three times higher in this group compared to cluster 2 (M = 19.00; SD = 1.63 vs. M = 6.29; SD = 0.50).

Figure 2.27. Distribution of consumption variables by cluster, males



Among females, the cluster analysis also identified two homogenous groups of surveys (Figure 2.28). Cluster 1 contained 13 surveys from Austria, Belgium, Denmark, Finland, France, Germany, Iceland, Latvia and Norway. Cluster 2 comprised five surveys from Croatia, Hungary, Poland, Portugal and Slovenia.

Figure 2.28. Results of cluster analysis, females

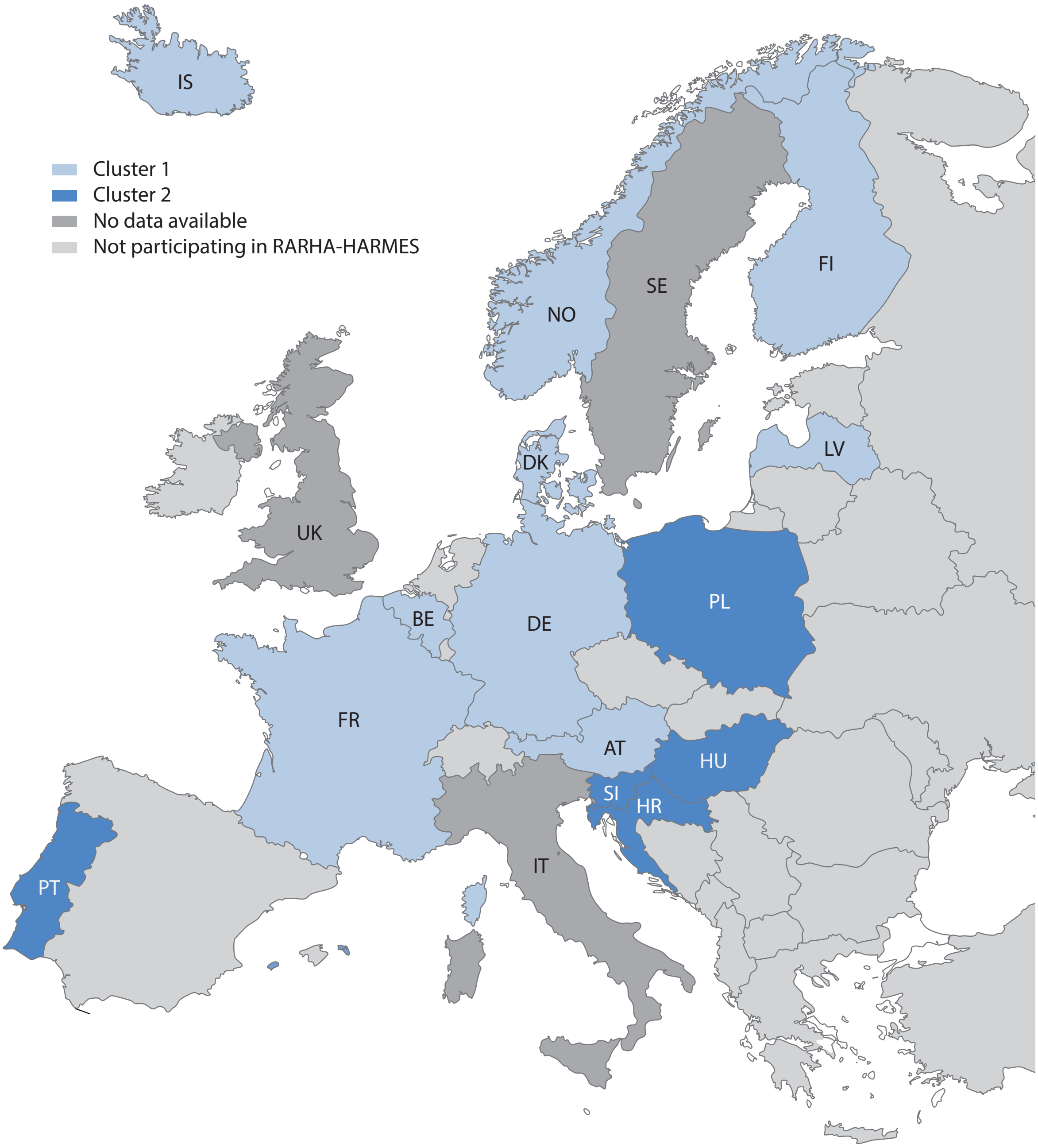
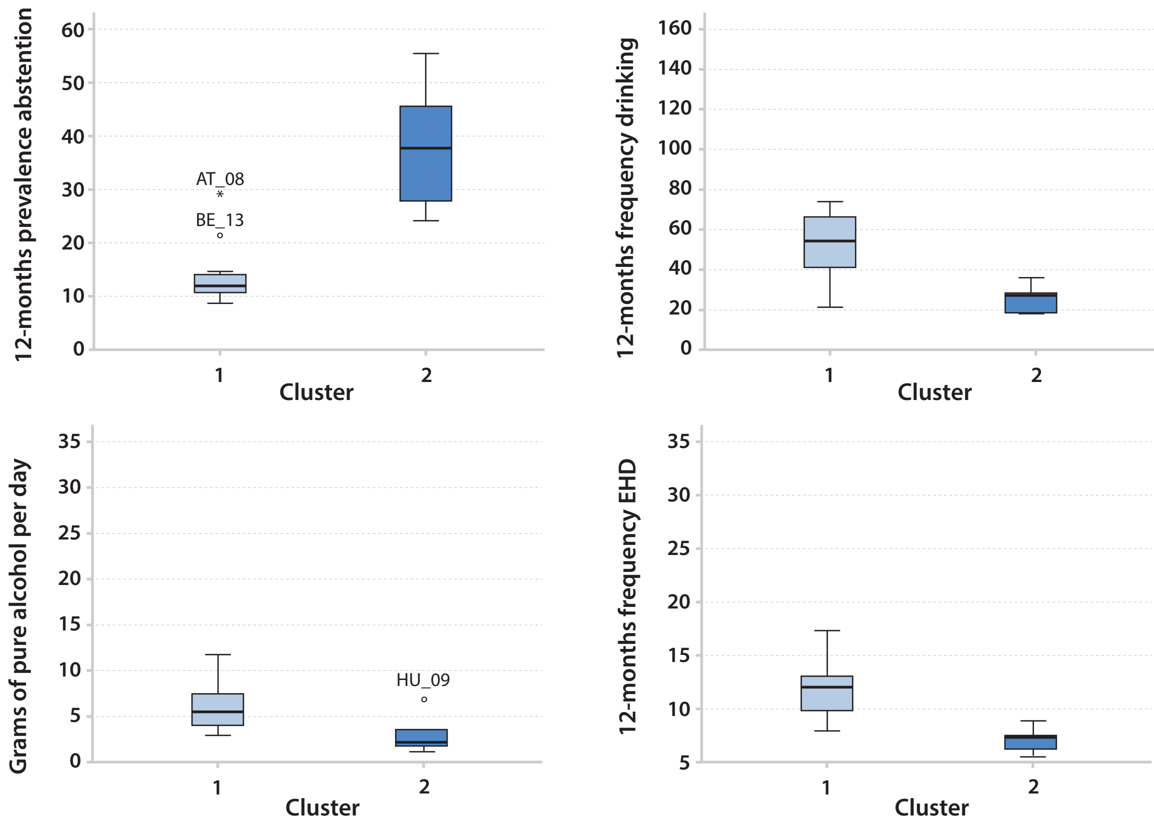


Figure 2.29 show the comparison of the consumption variables in the two groups. The prevalence of abstention was much lower in cluster 1 than in cluster 2 (M = 13.60; SD = 1.55 vs. M = 37.95; SD = 5.72). Cluster 1 further exhibited a higher frequency of drinking in the past 12 months (M = 52.10; SD = 4.73 vs. M = 25.01; SD = 3.35), higher values on grams of pure alcohol per day (M = 5.90; SD = 0.71 vs. M = 3.07; SD = 1.01) and a higher frequency of EHD (M = 7.87; SD = 0.80 vs. M = 2.43; SD = 0.67). All differences were statistically significant.

Figure 2.29. Distribution of consumption variables by cluster, females



B3 Discussion

B3.1 Comparability of the surveys

The major challenge of RARHA-HARMES was to achieve a sufficient degree of comparability between surveys with different methodologies and backgrounds. A large number of different strategies were adopted in order to harmonise the available datasets in the best possible manner. Among those strategies that are described in the method section were the restriction of the age range to 18 to 64 years, the transformation from categorical into numerical variables and the comparable computation of new variables. However, the underlying diversity of the original studies remains and affects the interpretation of the results. Three major aspects should be mentioned that have to be kept in mind when reading the further comments in the discussion.

First of all, national studies differed considerably with regard to study design and data collection methods which are known to influence prevalence estimates. Mode of administration is one of the crucial aspects in this regard. Even though the included studies were more comparable than those included in earlier cross-national comparisons, the surveys still varied by mode of administration (self-administered surveys, telephone interviews, face-to-fact interviews, online surveys and mixed-mode surveys). It is known from the literature that data quality is higher for self-completion as compared to the presence of others, especially when it comes to sensitive questions (Kreuter, Presser & Tourangeau, 2008). Online studies have the advantage of more flexibility, higher perceived anonymity and lower costs (Evans & Mathur, 2005). However, they usually achieve lower response rates (Lozar Manfreda, Bosnjak, Berzelak, Haas & Vehovar, 2008). Moreover, different population subgroups prefer the use of different modes of administration and, even when controlling for socio-demographic differences, there remain differences in the response patterns between different modes (Piontek et al., 2016).

Second, the operationalisations of measures varied across countries and surveys. The most widely cited example is the definition of episodic heavy drinking (Bloomfield, Hope & Kraus, 2013). As indicated in the method section, the country-specific threshold ranged from 2+ to 6+ drinks or 40 to 84 grams of pure alcohol, respectively. It is, however, positive to note that the majority of 10 countries used a comparable definition of 60 grams of alcohol. Nonetheless, the differences in this measure resulted in estimates that assess different levels of risky drinking which might not be comparable. In an earlier study conducting cross-national comparisons of alcohol consumption, the authors displayed the frequencies of episodic heavy drinking, but refrained from discussing country differences and concentrated on within-country comparisons by gender and age groups (Mäkelä et al., 2006).

Third, coverage rates differed substantially between the included surveys ranging from 24.5% to 77.7% (see Table 1.3. Coverage rates of the included surveys (percent)). Even though some of the variance might have been due to the fact that a certain alcohol volume is consumed by people not included in the present analyses (age groups 15 to 18 and above 64 years), there were still large differences that affect the comparisons. As Mäkelä and colleagues concluded, "[t]he differences in the coverage rates warn us against comparing the levels of consumption over countries on the basis of the survey estimates" (Mäkelä et al., 2006, p. i10). Another problem with regard to drinking quantities arises from the use of different questions for the assessment. It is positive to note that the vast majority of 19 surveys used a beverage-specific quantity-frequency (BSQF) measure, which has been evaluated as most suitable for international comparisons (Gmel et al., 2006; Bloomfield et al., 2013). Nonetheless, both the time frame and the number of included beverages varied between surveys. Whereas shorter reference periods have the advantage of being remembered better, their disadvantage is that, especially for infrequent drinkers, they capture drinking patterns worse (Dawson, 2003; Bloomfield et al., 2013). With regard to the number of included beverages, a general finding is that more volume is reported when more questions on consumption are asked (Dawson, 1998; Knibbe & Bloomfield, 2001).

To conclude, the comparability of surveys largely depends on the specific drinking indicator one is interested in. Indicators that can be used for comparisons are abstention rates and frequency of drinking because there is not so much variation in the assessment. More problematic is the use of drinking quantities and episodic heavy drinking, which are defined in substantially different ways. These difficulties need to be considered when describing drinking patterns across Europe and drawing conclusions based on national survey data.

B3.2 Drinking patterns across Europe

In Northern Europe, abstention rates were comparative low – with about 10 percent in the past 12 months – and overall drinking frequency was moderate. Northern European males showed lower drinking quantities compared to males in other regions, whereas females exhibited rather high drinking quantities. The frequency of episodic heavy drinking was high, as was the prevalence of problematic alcohol use. In general, these findings only partly correspond to earlier studies summarizing that alcohol in the Northern countries was less integrated into everyday life, more reserved for special occasions and drunk, on average, in larger quantities on a drinking day.

In Central European countries, a rather problematic overall drinking behaviour was observed, with moderate abstention rates but the highest frequency of drinking, rather high drinking quantities, and a high frequency of episodic heavy drinking, as well as a moderate prevalence of problematic alcohol use. In contrast to some earlier studies, this region thus emerged as the one where alcohol seems to be most integrated into everyday life and is drunk at comparably high levels.

Conclusions concerning Eastern Europe are limited by the fact that there were surveys from only two countries. Respondents in these two countries showed comparably high rates of abstention in the European context and rather low drinking frequencies. Average drinking quantities were high among males but low among females. Episodic heavy drinking was less frequent as compared to other regions and the prevalence of problematic alcohol use was moderate.

Finally, in Southern Europe the highest abstention rates were found, with up to 55% for females in Portugal. Frequency of drinking was high or at least moderate among females, whereas overall drinking quantities were moderate or low among both genders. Both frequency of episodic heavy drinking and the prevalence of problematic alcohol use were low. This pattern is in line with the hypothesis that, especially in Mediterranean countries, there would be more daily light drinking with a higher frequency of drinking overall but smaller quantities of alcohol drunk on one occasion.

B3.3 Gender, age and SES effects

In addition to the regional pattern of alcohol consumption, we analysed the predictive effects of gender, age and socio-economic status. As expected, males drank more often and in a more problematic way than females. Gender differences were smallest with regard to abstention and were larger the more extreme the drinking behaviour was. The gender ratio was higher for drinking quantity than for frequency, still higher for episodic heavy drinking and highest for the prevalence of problematic alcohol use. This is a well-known pattern that was also found in earlier studies (Mäkelä et al., 2006; Knibbe & Bloomfield, 2001). It is, however, interesting to note that gender differences in the present analyses were generally smaller than gender ratios reported in the GENACIS study 10 to 15 years ago (Mäkelä et al., 2006). With regard to the regional pattern, Central and Northern Europe exhibited the smallest gender differences, whereas the largest differences were observed in Southern Europe.

There were also some general age effects. The most pronounced differences could be observed for frequency of drinking and frequency of episodic heavy drinking. In general, frequency of drinking increased and frequency of episodic heavy drinking decreased with age. The most widely discussed reason for the higher prevalence of problematic drinking in younger age groups is a specific drinking culture which is characterized by more problematic drinking motives, alcohol use expectancies, beverage preferences, drinking contexts and certain drinking rituals such as pre-drinking (Kuntsche, Knibee, Gmel & Engels, 2006; Müller, Piontek, Pabst, Baumeister & Kraus, 2010; Pabst, Kraus, Piontek, Müller & Demmel, 2014; Piontek, Kraus & Rist, 2013; Wahl, Kriston & Berner, 2010; Wells, Graham & Purcell, 2009). The most consistent age effects in our study were observed in Northern and Southern European countries, whereas quite diverse age patterns were found in Central Europe.

Socio-economic status also showed some interesting effects on alcohol consumption. A consistent pattern emerged with regard to abstention rates which were higher among population subgroups with low SES. In addition, frequency of drinking was higher among those with high SES. In the majority of countries, no significant SES effect was found for indicators of more problematic alcohol consumption such as episodic heavy drinking or problematic use. International research on social inequalities in drinking corroborates the finding that low SES groups tend to have a lower prevalence of alcohol use (Maron, Kraus, Pogarell, Gomes de Matos & Piontek, 2016; Casswell, Pledger, & Hooper, 2003; Huckle, You, & Casswell, 2010; Mackenbach et al., 2008; van Oers, Bongers, van de Goor, & Garretsen, 1999). Interestingly, the majority of these studies reported that, in the same group, the risk for EHD was increased. A comparable effect of an increased EHD frequency in the low SES group was observed in seven out of the 24 surveys included in our analyses (SE_13, LV_12, DK_10, DK_13, BE_13, FR_10, SI_12).

B3.4 Comparability with RARHA SEAS and other cross-national research

The results of RARHA-HARMES can be compared to the new Standard European Alcohol Survey (SEAS) conducted under task 1 of RARHA work package 4. Within this subproject, data on alcohol consumption were collected in the year 2015 in 19 countries. Countries that participated in both HARMES and SEAS were Iceland, Norway, Sweden, Finland, Denmark, the UK, France, Austria, Poland, Hungary, Croatia, Italy and Portugal. Moreover, there are a number of earlier cross-national research projects that compared drinking behaviour between different European countries. Among the most widely cited are the European Comparative Alcohol Study (ECAS; Hemström et al., 2002; Leifman, 2002) and the Gender, Alcohol and Culture: An International Study (GENACIS; Mäkelä et al., 2006). Given the fact that the latter study was most comparable with regard to the inclusion of surveys as well as the methodological approach, the present results are mainly related to these earlier findings. There are, however, also notable differences between GENACIS and RARHA-HARMES. Surveys included in the GENACIS study were generally conducted 10 years earlier (1993 to 2000). Both national and regional surveys were included, whereas only national studies were used in the present project. The age range slightly differed with GENACIS using 20 to 64 years and HARMES using 18 to 64 years. With regard to the mode of administration the majority of surveys in the GENACIS project were face-to-face interviews, whereas most surveys included in HARMES used a mixed-mode approach.

Based on the included 14 studies, there was little variation in abstention rates among males and some more variation among females in the GENACIS data. The authors concluded that "abstinence can no longer be viewed as feature characterizing and distinguishing different drinking cultures" (Mäkelä et al., 2006, p. i17). In contrast to this finding, abstention emerged as one of the drinking indicators in our study that showed the most pronounced regional variation. Rates increased from Northern, Western, and Eastern to Southern Europe among both males and females. A similar pattern of largely varying abstention rates was observed in the RAR-

HA-SEAS surveys (Zin-Sedek et al., 2016). Similar to earlier studies, both current data analyses found higher abstention rates in females than males as well as in older than younger adults.

The results of our study largely confirm previous results obtained from both ECAS and GENACIS with the highest frequency of drinking observed in Southern and Central European countries and lower frequencies in Northern Europe (Hemström et al., 2002; Mäkelä et al., 2006). In contrast to the expectations, the two Eastern European countries in our study showed the lowest drinking frequencies. Unfortunately, Poland was not included in the GENACIS study, whereas Hungary also exhibited a rather low overall frequency of drinking. As in the earlier studies, males in our study reported a higher frequency of drinking than women and gender ratios were lowest in Northern Europe. Based on current drinkers only, there are also great similarities between RARHA-HARMES results and other studies. For example, the RARHA-SEAS surveys yielded comparable estimates to other studies, with Portugal representing the upper end of the frequency scale and the Nordic countries Iceland, Sweden, Finland and Norway representing the lower end of the scale (see A3.3).

As mentioned above, drinking quantity seems to be the drinking indicator which is most problematic for international comparisons due to different methodologies and beverages considered. This might be the central reason for largely diverging quantity estimates and regional patterns in different studies. Aspects of drinking quantity that can be compared across studies are within-country results such as gender ratios and the relative share of different beverages in total consumption. A common finding in cross-country research is a larger drinking quantity for males compared to females (Mäkelä et al., 2006; Leifman, 2002; see A3.3). Interestingly, gender ratios in RARHA-HARMES were larger with regard to drinking quantity than for frequency, whereas the opposite was reported for GENACIS (Mäkelä et al., 2006). With regard to the relative contribution of single beverages in total consumption, results from both RARHA subprojects are largely comparable. With only a few exceptions, beer dominates overall volume in most European countries. Southern countries, especially Portugal, showed the highest share of wine, whereas Poland and the Baltic states stood out with the largest contribution of spirits.

The findings concerning episodic heavy drinking show comparable overall patterns in RARHA-HARMES and SEAS (see A3.3). In both analyses, Northern European countries tended to have the highest 12-months prevalence rates, although the effect was more pronounced in the present analyses. In both cases, the lowest prevalence of EHD was observed in Portugal. Episodic heavy drinking showed marked gender differences in all cross-national comparisons, with men reporting EHD two to three times more often than women, on average. In addition, a general pattern is found with smaller gender differences in Northern European countries and the largest differences in Southern countries (see A3.3; Mäkelä et al., 2006). The country with the most extreme gender ratio was Portugal (RARHA-HARMES: 23.0; RARHA-SEAS: 8.0).

References

Bloomfield, K., Hope, A. & Kraus, L. (2013). Alcohol survey measures for Europe: a literature review. Drugs: Education, Prevention and Policy, 20, 348-360.

Casswell, S., Pledger, M. & Hooper, R. (2003). Socioeconomic status and drinking patterns in young adults. Addiction, 98, 601–610.

Dawson, D. (1998). Volume of ethanol consumption: Effects of different approaches to measurement. Journal of Studies on Alcohol, 59, 191–197.

Dawson, D. (2003). Methodological issues in measuring alcohol use. Alcohol Research and Health, 27, 18–29.

English, D. R., Holman, C. D. J., Milne, E., Winter, M., Hulse, G. K., Godde, G. et al. (1995). The quantification of drug caused morbidity and mortality in Australia. Canberra: Commonwealth Department of Human Services and Health.

Evans, J. R. & Mathur, A. (2005). The value of online surveys. Internet research, 15, 195-219.
Gmel, G., Graham, K., Kuendig, H. & Kuntsche, S. (2006). Measuring alcohol consumption - should the 'graduated frequency' approach become the norm in survey research? Addiction, 101, 16–30.
Hemström, Ö., Leifman, H. & Ramsted, M. (2002). The ECAS-survey on drinking patterns and alcohol-related problems. In T. Norström (ed.), Alcohol in postwar Europe. Consumption, drinking patterns, consequences and policy responses in 15 European countries (pp. 115-136). Stockholm: National Institute of Public Health.
Knibbe, R. & Bloomfield, K. (2001). Alcohol consumption estimates in surveys in Europe: comparability and sensitivity for gender differences. Substance Abuse, 22, 23-38.
Knibbe, R. & Bloomfield, K. (2001). Alcohol consumption estimates in surveys in Europe: Comparability and sensitivity for gender differences. Substance Abuse, 22, 23–38.
Kreuter, F., Presser, S. & Tourangeau, R. (2008). Social desirability bias in CATI, IVR, and web surveys: The effects of mode and question sensitivity. Public Opinion Quarterly, 70, 847-865.
Kuntsche, E., Knibbe, R., Gmel, G. & Engels, R. (2006). 'I drink spirits to get drunk and block out my problems...': Beverage preference, drinking motives and alcohol use in adolescence. Alcohol and Alcoholism, 41, 566-573.
Leifman, H. (2002). A comparative analysis of drinking habits in six EU-countries in the year 2000. Contemporary Drug Problems, 29, 501-548.
Lozar Manfreda, K., Bosnjak, M., Berzelak, J., Haas, I., Vehovar, V. & Berzelak, N. (2008). Web surveys versus other survey modes: A meta-analysis comparing response rates. Journal of the Market Research Society, 50 (1), 79-104.
Mackenbach, J.P., Stirbu, I., Roskam, A.J., Schaap, M.M., Menvielle, G., Leinsalu, M., Kunst, A.E.; European Union Working Group on Socioeconomic Inequalities in Health. (2008). Socioeconomic inequalities in health in 22 European countries. New England Journal of Medicine, 358, 2468–2481.
Mäkelä, Pl., Gmel, G., Grittner, U., Kuendig, H., Kuntsche, S., Bloomflied, K. & Room, R. (2006). Drinking patterns and their gender differences in Europe. Alcohol & Alcoholism, 41 (S1), i8-i18.
Maron, J., Kraus, L., Pogarell, O., Gomes de Matos, E. & Piontek, D. (2016). Occupational inequalities in psychoactive substance use: A question of conceptualization? Addiction Research & Theory, 24, 186-198.
Müller, S., Piontek, D., Pabst, A., Baumeister, S. E. & Kraus, L. (2010). Changes in alcohol consumption and beverage preference among adolescents after the introduction of the alcopops tax in Germany. Addiction, 105, 1205-1213.
Pabst, A., Kraus, L., Piontek, D., Müller, S. & Demmel, R. (2014). Direct and indirect effects of alcohol expectancies on alcohol-related problems. Psychology of Addictive Behaviors, 28, 20-30.
Piontek, D., Kraus, L. & Rist, F. (2013). Social contexts and the occurrence of episodic heavy drinking. International Journal of Alcohol and Drug Research, 2, 45-52.
Piontek, D., Kraus, L., Gomes de Matos, E. & Atzendorf, J. (2016). Der Epidemiologische Suchtsurvey 2015: Studiendesign und Methodik. Sucht, 62, 259-269.
van Oers, J.A., Bongers, I.M., van de Goor, L.A., & Garretsen, H.F. (1999). Alcohol consumption, alcohol-related problems, problem drinking, and socioeconomic status. Alcohol and Alcoholism, 34, 78–88.
Wahl, S., Kriston, L. & Berner, M. (2010). Drinking before going out - a predictor of negative nightlife experiences in a German inner city area. International Journal of Drug Policy, 21, 251-254.
Wells, S., Graham, K. & Purcell, J. (2009). Policy implications of the widespread practice of 'pre-drinking' or 'pre-gaming' before going to public drinking establishments: are current prevention strategies backfiring? Addiction, 104, 4-9.
World Health Organization (WHO) 2016. Recorded alcohol per capita (15+) consumption (in litres of pure alcohol). Online available at: http://apps.who.int/gho/data/node.main.A1026?lang=en&showonly=GISAH.

SUGGESTIONS FOR COMPARATIVE MONITORING ACROSS EUROPE

Europe and in particular the European Union (EU) is the biggest producer and consumer of alcohol world-wide. It also belongs to the largest exporters and importers of alcohol. Therefore, individual Member States and the European Commission have for years been pre-occupied with economic significance of alcohol for their economies, including the trade balance and have ignored the health and social impact of drinking.

Research advances as well as growing sensitivity to health in better-off countries, eventually increased alcohol concern across Europe; this was reinforced by a dramatic mortality crisis in Eastern Europe in the 1990s, which affected mostly people in their working and drinking ages.

In many countries monitoring of alcohol consumption, related problems and policies became a crucial issue from the public health perspective. Reducing alcohol mortality and morbidity as well as social harm related to drinking appeared as a realistic and cost-efficient strategy to improve social well-being across Europe without much burden on national budgets, and to diminish health inequalities across and within European countries. In addition to collecting and extending routine statistics, many countries realised that their alcohol policies need to be supported by population surveys that bring together more detailed data on the distribution of alcohol consumption across different socio-demographic categories, frequency and volume of drinking, individual consequences, risk and protective factors. By the beginning of the 21st century, almost all European countries were collecting survey data on alcohol in the form of either alcohol-specific surveys or alcohol sections within more extended surveys on health or substance use in general. Efforts in this area were undertaken also at European level as a few alcohol questions were included into the European Health Interview Survey (EHIS) launched regularly by the EUROSTAT and into General Population Surveys on drugs co-ordinated by the European Monitoring Centre on Drugs and Drug Addiction (EMCDDA). Nevertheless, the range of data collected at European level and their comparability are limited compared to complexity of alcohol consumption and harms and their context, which should be monitored and against a background of the amount of harm alcohol produces or may potentially produce without proper health policies.

Inclusion of the survey approach into EU Joint Action on Alcohol as a crucial component of alcohol monitoring across Europe reflects growing recognition among Member States and within the European Commission for a need of co-ordinated and evidence-based alcohol policy to improve the health and social welfare of European citizens. It also reflects the fact that the Member States acknowledge that European comparative understanding of problems related to alcohol is of great importance for their management at the national and European levels.

Two different tasks adopted to scrutinise the potential of a comparative survey approach at the European level are described in this report and the lessons learned will be summarised below. Execution of task 1, that encompasses the elaboration of a common survey and its implementation in 19 countries demonstrated first of all that a Standardised European Alcohol Survey (RARHA SEAS) is possible and feasible despite variation of alcohol cultures across Europe. It also showed that an *ad hoc* team of scientists representing different research traditions is able to adopt a common survey protocol, and learn from each other to increase European research capacity. RARHA SEAS produced a number of important data on frequency of drinking, volume consumed, risky single occasion drinking, drinking preferences, motives and context of drinking, individual harm. Its unique contribution consists in data on harm to others' drinking and attitudes towards alcohol policy, both of great significance in current policy debates.

The participation of partners from 17 countries in the execution of task 2 confirms also a commitment to the comparative approach present across Europe. Efforts undertaken to pull the data from existing national surveys and to recode them in a comparative manner proved to be successful too. Harmonisation of Alcohol Related Measures in European Surveys (RARHA HARMES) brought together a great amount of comparative data on alcohol consumption and its individual components such as volume consumed, frequency of drinking, drunkenness, episodic heavy drinking, some data on problematic alcohol use, mostly based on the AUDIT instrument, and a small amount of other data e.g. on context of drinking, harm from others or on opinions on alcohol policies. HARMES pointed to a very low level of standardisation across

European surveys that apply different methodologies, different time frames, and different thresholds for episodic heavy drinking.

Both, RARHA SEAS and RARHA HARMES confirmed difficulties in comparing overall consumption levels either expressed in terms of annual consumption or in grams per day. A major problem that hinders direct comparability consists in varying coverage rates i.e. percentage of recorded consumption, which is covered in the course of the survey. The national coverage rates varied from about 20% in Croatia and Slovenia to 77% in Hungary and Denmark in RARHA HARMES study while in RARHA SEAS from 32% in France to 84-85% in Bulgaria and Norway. These varying coverage rates do not seem to be stable across time. E.g. the Hungarian survey with high coverage rate of 77% in HARMES had one of the lowest coverage rates in SEAS not surpassing 40%. Similarly, coverage rates in three subsequent Danish surveys varied from 57% to 77%. This common experience of both tasks indicates that overall consumption should primarily be estimated based on recorded sales and other indirect indicators rather than on surveys. On the other hand, as shown in the report from both tasks, surveys can produce numerous data, that not only supplement routine statistics but also offer new perspectives on the interpretation of statistical data.

The following suggestions for future action could be formulated:

1. Overall experience from RARHA SEAS and RARHA HARMES suggests a need for further efforts to harmonise alcohol survey research across Europe.
2. Alcohol-specific or substance use-specific surveys could be recommended as they offer more data and higher coverage rates compared to general health or social surveys.
3. Standardised alcohol survey implemented across Europe will offer more comparative, policy-relevant data than re-analyses of different national surveys.
4. RARHA SEAS survey should be replicated within four-five years to grasp trends in alcohol epidemiology and to monitor the impact of alcohol policies as well as the influence of more general socio-economic and cultural developments.
5. Sustainability of standardised alcohol surveys could be secured by the establishment of a European institutional framework. Different options needs to be considered including a special European agency for alcohol research and policy or extending the mandate of the European Monitoring Centre for Drugs and Drug Addiction.

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