



Co-funded by  
the Health Programme  
of the European Union



**Project number:** 710063

**Project title:**

ALLCOOL - Raising awareness and action-research on Heavy  
Episodic Drinking among low income youth and young adults in  
Southern Europe

**Project beneficiaries:** Agência Piaget para o Desenvolvimento, Spora Sinergies SCCL,  
Azienda Unita Sanitaria Locale di Bologna

**Deliverable number:** D4.3

**Research Final Report**

**Author:** Spora Sinergies, SCCL

This report is part of the project '710063 / ALLCOOL' which has received funding  
from the European Union's Health Programme (2014-2020).

The content of this report represents the views of the author only and is his/her sole responsibility; it can not be considered to reflect the views of the European Commission and/or the Consumers, Health, Agriculture and Food Executive Agency or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.

SHORT BACKGROUND.....	3
1. INTRODUCTION .....	4
2. LITERATURE REVIEW.....	5
2.1 About Heavy Episodic Drinking concept.....	5
2.2 Southern Europe panorama on HED and Alcohol use: comparison between Italy, Portugal and Spain .....	6
3. METHODOLOGY.....	9
3.1 Quantitative methodology .....	9
3.2 Qualitative methodology .....	12
4. RESULTS .....	13
3.3 Consumption patterns.....	14
How many days do young people drink alcohol?.....	14
When do young people consume alcohol?.....	16
Where do young people consume alcohol?.....	17
3.4 Heavy Episodic Drinking .....	20
HED prevalence.....	20
HED by intensity .....	22
HED consumption pattern .....	25
How many days do young people experience a HED episode? .....	26
Where does HED take place? .....	26
HED and other substances consumption .....	28
3.5 Risky and protective behaviours .....	29
Presence of risky and protective behaviours .....	29
Sociodemographic differences .....	34
Presence of risky and protective behaviours depending on the HED level .....	36
Collective versus individual strategies.....	36
3.6 Consequences and effects of drinking .....	38
Presence of consequences and effects of drinking .....	38

Sociodemographic differences .....	40
Presence of the consequences depending on the alcohol consumption profile .....	44
3.7 Intervention .....	44
Current situation and actual interventions .....	44
Recommendations .....	46
5. Conclusions .....	48
Consumption patterns .....	48
Heavy Episodic Drinking .....	48
Risky and protective behaviours .....	49
Consequences and effects of drinking .....	50
Bibliography .....	52

## **SHORT BACKGROUND**

Binge drinking or heavy episodic drinking (HED) is the sporadic and acute alcohol intoxication. It is a complex and multifaceted use pattern that has been challenging research, interventions and public policies. Although there is a wide range of studies in its impact on health, there are still some gaps concerning the relation between alcohol use, socioeconomic factors (low income, social inequality and unemployment) and certain cultural and environmental aspects shared by Southern European countries – Portugal, Spain and Italy.

ALLCOOL - raising awareness and action-research on heavy episodic drinking among low income youth and young adults in Southern Europe – is an action-research project specifically designed to address these gaps, in order to improve scientific knowledge of the sporadic and acute alcohol use among individuals ranging from 18 to 29 years of age who live in Porto, Tarragona and Bologna and raise-awareness of this phenomenon. The research program will be developed according to quantitative and qualitative data collection and hopefully encourage people to reflect on this issue. In order to guarantee the involvement of the identified stakeholders, this process comprehends five Advisory Forums.

This document is the Final Report of the research conducted in the 3 cities of the ALLCOOL consortium – Porto, Bologna and Tarragona. This report aims to expose the main comparative results of the research, focusing on the main differences between the countries and the main similarities Southern Europe countries share. It includes an introduction, a brief literature review, the methodology approach, the results and some final conclusions.

# 1. INTRODUCTION

---

This Final report integrates the results from the research conducted in Porto (Portugal), Bologna (Italy) and Tarragona (Spain) and it is part of the Work Package 4 of the ALLCOOL project. This research aims to increase knowledge related to Heavy Episodic Drinking in Southern European Countries. Its outputs will support the implementation of other two Work Packages of the project (WP5. Consultative Forum and WP4. Pilot Intervention).

European guidelines and organizations working on the field have been stressing the need to increase research as one main area of action for supporting the implementation of evidence and cost-effective practices in preventing alcohol related harm (e.g., EU strategy to support Member States in reducing alcohol related harm, 2006; CNAPA, 2014). Moreover, there has been a lack of research considering, alcohol related harm, namely HED on Southern European countries, such as Portugal, Spain and Italy. This is particularly relevant considering that these countries share important environmental features that contribute for preventing the adoption of healthy lifestyles, namely socioeconomic risk factors such as low income, social inequalities and unemployment (WHO, 2014).

Given this situation, the objective of this research is to study Heavy Episodic Drinking, consumption patterns, consequences and effects of drinking among youth from Italy, Portugal and Spain, focusing on the sociodemographic differences. Moreover, it aims to report about intervention addressing HED.

This document presents the main results of the local research carried out in the city of Tarragona (Spain). The first section addresses the theoretical background of the research, as well as a brief introduction to some data regarding heavy episodic drinking concept and alcohol consumption in southern Europe. The second section includes the main results of the research. Concretely, it exposes results regarding the drinking patterns, heavy episodic drinking, risky and protective behaviours, consequences and effects of drinking and, finally, intervention. The comparative analysis carried out highlights the main differences found between the three countries, as well as those drinking patterns shared among these Southern European countries. The last section reports the conclusions drawn in these results.

## 2. LITERATURE REVIEW

---

### 2.1 About Heavy Episodic Drinking concept

Heavy Episodic Drinking (HED) is a theoretical construct that refers to the intake of large volumes of alcohol in a short period of time. This term is used as a boundary between non-problematic and problematic alcohol consumption.

Multiple researches report co-occurrence of HED and negative consequences, such as unprotected sexual behaviour, academic or professional failure interpersonal problems (Townshend et al., 2014; Hibell et al., 2012, WHO, 2014, Viner & Taylor, 2007). In consequence, this concept is used to define whether alcohol consumption can cause health, social, sexual or relationship negative consequences or not.

Nevertheless, there are different operational definitions of this concept in the literature, which differ on the cut-offs for number of drinks, as well as on the duration of a HED episode. Therefore, stating whether a person has conducted a HED or not can change depending on these variables. The HED concept is, then, a controversial concept which hasn't achieved an international consensus (Pearson, 2015; Gmel, 2011).

In order to establish if someone has conducted a HED it is necessary to quantify the number of drinks and the interval of time. The methodology used to quantify the number of alcohol units depending on the drinks is quite similar in the international literature reviewed (Observatorio Español de la Droga y las Toxicomanías (OEDT), 2015A; Executive Agency for Health and Consumers (CHAFEA), 2007). In this research, it has been used the following conversion table, stipulated by the World Health Organization (WHO).

**Equivalence Table**

<b>Drink</b>	<b>Volume</b>	<b>Units of drink</b>
<b>Wine</b>	<b>1 cup/glass</b> (100 ml.)	1
	<b>1 bottle</b> (750 ml.)	7,5
	<b>1 liter</b>	10
<b>Cervesa</b>	<b>1 draft</b> (250 ml.)	1
	<b>1 liter</b>	5
<b>Distilled</b>	<b>1 shot</b> (30 ml.)	1
	<b>1 cup</b> of whisky, vodka, rum, or similar (50 ml.)	2
	<b>1 long drink</b> distilled rink with soda or juice	3
	<b>1 liter</b>	40

According to most of the studies reviewed, the standard unit of drinks to calculate HED is different for men and women. The cut-off in this study is:

- HED for women: 4 or more standard drinks in a single occasion.
- HED for men: 5 or more standard drinks in a single occasion.

However, some studies claim establishing this kind of dichotomic measure is problematic, since it collapses drinkers with very different drinking patterns in just one category. "Using a cut-off with linearly related data is essentially falsely dichotomizing a continuous measure(...)" Dichotomization of a continuous measure can result in a loss of statistical power, making statistical tests less sensitive to detecting existing effects, which has serious implications when these measures are used to quantify the effects of preventions/interventions" (Pearson et. al, 2015). This false dichotomization may be problematic when analysing intervention effects.

Not asking for the number of drinks consumed on a HED episode means researchers assume uncritically that these occasions contained the same but unknown amount (Gmel, Kuntsche, Rehm, 2011). Having 5 or 10 drinks on one occasion are different drinking patterns that can cause different negative consequences, so researchers should be able to establish which is the exact problematic drinking pattern present in the studied population.

The main controversy related to HED concerns the time-frame criterion. On one hand, some studies define HED as the intake of a specific number of standard drinks in a *single occasion*. On the other hand, some studies frame the intake within a *2-hour period* (for a revision of this controversy see Pearson, 2015 or Parada et al., 2011).

Given the lack of scientific agreement, this research includes questions about the time taken to complete a HED episode, as well as about the total amount of drinks consumed within the HED episode. This approach overcomes the debate, since it allows to calculate different alcohol consumption intensities and frequencies, trying to make visible the different patterns of consumption as they are linked to a continuous method of measuring.

## **2.2 Southern Europe panorama on HED and Alcohol use: comparison between Italy, Portugal and Spain**

The last WHO Global Status Report on Alcohol (2014) shows HED is a drinking pattern widespread in the northern Europe countries. On the contrary, Mediterranean countries have incorporated this pattern in the last decades (OEDT, 2015A; León-Muñoz et al, 2014). This show the different drinking cultures southern and Northern Europe countries have. Traditionally, southern countries have had a drinking pattern based on daily moderate

consumption of fermented beverages, such as wine, and less use of spirits. In these countries, alcohol consumption is considered an integral part of everyday life (Rolando et al, 2012). This moderate use, in contrast to the consumption patterns of Northern Europe, seems to protect young people from the harm caused by alcohol (Calafat et al, 2010). Nonetheless, alcohol consumption patterns are becoming more diverse and some studies reveal that differences between northern and southern countries are decreasing (Devaux & Sassi, 2015).

Alcohol is the most prevalent psychoactive substance in all age ranges in the three Southern Europe countries present in this research (Portugal, Italy and Spain). Nevertheless, there are differences regarding the prevalence of alcohol consumption between the countries. In Portugal and Italy, results show a progressive decrease of alcohol consumption, similar to what has been registered for Europe in the last 20 years (GISAH, 2014). The 3<sup>rd</sup> portuguese National Enquiry About Psychoactive Substances Use In The General Population show have brought to light patterns of consumption that show a decrease when compared to previous years, concretely, the prevalence of alcohol consumption among general population is 74% (INPG, 2012). Similarly, in Italy, following the data from the National Statistical Institute, during 2015 the 64.5% of general population has consumed at least once alcoholic beverage. Although this share is stable compared to the last year, it has decreased compared to ten years ago, when it was 69.7%. By contrast, prevalence of alcohol consumption in Spain rises to 93.1%. This prevalence has remained stable since 1997 (OEDT, 2015A). As the data shows, Spain presents the higher prevalence while Italy presents the lowest one. The Global Information System on Alcohol and Health (GISAH, 2014) offers a description of the average of liters of pure alcohol per year consumed in these countries. In this case, Portugal presents the highest average (12.9l), followed by Spain (11.2l) and Italy (6.7l).

On the contrary, Heavy Episodic Drinking is following a different trend in Southern Europe. It has become more popular in the last decade in Portugal and Spain and, if we focus on young people (aged 18-25), it has increased in the different countries under study. This proves Southern European countries are changing its consumption patterns and they are becoming similar to Northern countries. Despite there is a shared trend between Mediterranean countries, different studies show there are also differences among them. Based on the report elaborated by WHO (2014), if we analyse Italy, Portugal and Spain separately, the differences arise. Italy is the country with the lowest prevalence of HED (last month, +15 years old): 4.7% among general population and 6.2% among drinkers only. Spain is the second one and its prevalence among general population is 13.4% and 19.6%

among drinkers. Portugal presents the highest HED prevalence (“population”=20.4; “drinkers only”= 35.8) approaching some north European countries like the United Kingdom.

In Southern European countries, the HED increase has been significant especially among youngsters. This drinking pattern increases between 14 and 18 years old in Portugal, Italy, as well as in Spain. The alcohol use at the youngest ages responds to an experimental and initiation pattern. At these ages, HED is a sporadic practice and its prevalence rate ranges from 9% to 30%, depending on the age and the country. In this regard, it is worth noting that as age increases, the prevalence rises exponentially. Finally, alcohol consumption among youth begins at the age 16-17, but HED becomes a common practice at the age of 18 (ESPAD, 2015; CNESPS, 2014; ESTUDES, 2014; OEDT, 2015B). After the 18 years old, HED follows the same growing trend. HED practice increases starting from the age of 18 and reaches its peak between 20-24 years old. Then, it gradually decreases beginning at about age 30. Analysing the three countries separately, we can observe this trend is the same in all of them. In Italy, HED is declining among general population, but it is increasing among 18-24 year old people (15.6% in 2015, 15.4% in 2005) (ISS, 2016). In Spain, the HED prevalence rises from 25% among youth aged 15-19 to 35% among people aged 20-24 and, then, it decreases. Although there aren't such detailed data in the case of Portugal, we can deduce a similar pattern, since HED prevalence is of 30% until 34 years old and after that it decreases. It should be noted that HED prevalence is principally expressive among male youth. Moreover, the reduction trend starting at the age of 25-30 is larger among women than men (OEDT, 2015A; ISS, 2016; INPG, 2012).

Some researches state one of the main changes HED has incorporated in Mediterranean drinking cultures is the type of drink people usually have. Over time, differences across countries are diminishing mainly because of changes in the type of beverages typically consumed. Increasingly, it is possible to find, in the different countries several kinds of alcoholic beverages, beyond the more typical ones. This growing diversity in the supply of alcoholic beverages has a direct impact in the traditional drinking patterns (*Devaux & Sassi, 2015*). These studies point wine consumption is decreasing, while spirits and beer consumption is increasing. In this regard, National surveys reveal the intake of long drinks is more present among youth (15-24 years old) during the weekend, while wine is still widespread among adults over 34 years old (OEDT, 2015A; León Muñoz et al, 2014; Solei-Vila et al.,2014). In Italy, wine still prevails as the most common beverage (52.2%), followed by beer (46.4%), while 42.1% declares to consume spirits (ISTAT, 2016). Portugal present very similar percentages: wine (55%), beer (33%) and spirits (11%) (GISAH, 2014). Spain is the only country where beer has already passed wine, so it is the most widespread alcoholic

drink (19.3% during the week and 44.4% during the weekend in front of 12.3% and 24.9%). Nevertheless, this prevalence is reversed from age 55, when wine is the most consumed beverage (OEDT, 2015A).

The incorporation of HED in Mediterranean countries as Portugal, Italy and Spain, specifically among youngsters, implies changes in their consumption patterns, the consequences and effects of alcohol, and the protective and risky behaviours young people carry out. Therefore, more research is needed to account for these changes, understand their implications and suggest new strategies in terms of intervention to address this phenomenon. It is fundamental to implement comparative research among southern European countries in order to signalize the variables and contextual factors (for examples, culture, national policies, etc.) that contribute to these discrepancies in the HED prevalence in Southern Europe.

### 3. METHODOLOGY

---

This research is based in a **combination of a qualitative and quantitative methodology approach**. Using both methodologies allows to obtain and produce an exhaustive knowledge about alcohol consumption and, concretely, about Heavy Episodic Drinking among youth between 18-29 years old. Mixed methods design is particularly useful to study complex phenomena and generate and test grounded theory (Johnson & Onwuegbuzie, 2004). This is particularly useful for the main objective that we aim to achieve on the project, that is, to produce knowledge that could inform the implementation of local pilot interventions tailored to the specificities of the target groups.

#### 3.1 Quantitative methodology

Quantitative methodology offers data exportable to all the Porto, Bologna and Tarragona young population between 18-29 years old who have consumed alcohol at least one time in the last 12 months before the survey. The quantitative data collection method used has been a self-administered structured questionnaire.

The main blocks of the questionnaire are:

- **Introduction block:** this block contains the main question about general **alcohol consumption frequency** during the last 12 months (Q1) and the screening dichotomous question to establish if the respondent has performed a **HED during the last 12 months** (Q2). If the answer to this question was affirmative, the

respondent must fill out all the survey, if negative, the respondent must respond only blocks A and C.

- **Block A:** This block contains questions about **contexts** and places where the respondent goes out, about the specific **protective behaviours** when going out, about **experimented consequences** when they consume alcohol, and about **other substances consumption**.
- **Block B:** This block contains questions about **Heavy Episodic Drinking (HED)** experience: frequency, places where it happens, and period of time and number of drinks consumed in the last HED occasion.
- **Block C:** This block contains questions to determine the **socioeconomic status** of the respondents: composition of the habitual residence, parents occupation and education level, total income of household and sociodemographic profile of the respondent (sex, age, and completed education level).

The questionnaire has been designed specifically for this research. Nevertheless, some blocks of the questionnaire are based on previous studies which offer proven and valid questions that have been replicated:

- **Sociodemographic variables:** to calculate the social position of the respondents, it has been used an adaptation of the ESOMAR System (Instituto Nacional de Estadística de Chile, 2011; Office for National Statistics, 2010).
- **Protective and risky behaviours, and consequences of drinking:** the items regarding protective behaviours used in the questionnaire are based in pre-existent scales, which have been tested and validated in different scientific studies (Vladar, Lee, Stearns, and Axelrod, 2015). Related to the consequences of drinking, the items have been are also grounded in previous researches (Inkelas KK, Brower AM, Crawford S, et al., 2004).
- **Heavy Episodic Drinking:** the main question used to establish the HED prevalence has been extracted from the EDADES questionnaire (Ministerio de Sanidad, Servicios Sociales e Igualdad, 2013), complemented with the Standard Drink Units conversion table, stipulated by the World Health Organization (WHO).

The **sample** has been randomly selected and it is composed by 1141 respondents from 18-29 years old (366 in Bologna, 403 in Porto, 372 in Tarragona) that have drunk alcohol at least one time in the last 12 months. The **confidence level** for the all 3 cities aggregate sample is 95.5% ( $\sigma=2$ ) for a maximum admissible error level of 2,97%.

The questionnaire has been distributed in different city areas, in proportion to the population of each of these areas, to assure the profile diversity. The sample has been stratified by gender and age to guarantee an **equal representation of each age and sex combination** to provide robust results when analyzing data by age groups and sex. For the aggregate data, regarding to sex, 545 men (47,7%), 594 women (52,1%) and 2 others (0,2%) have been interviewed. Regarding to the age, 613 respondents were 18 to 23 years old (53,7%) and 528 were 24 to 29 (46,3%). To avoid slight quota unbalance, the sample has been weighted.

Finally, it must be pointed that the questionnaire includes **socio-economic and educational variables to establish the social position or socioeconomic class of the respondents**. These variables are addressed to identify and make operative the *low income youth* concept, since this population is one of the targets of the research.

There are multiple methodologies to calculate social position, in this research, an adaptation of the ESOMAR System (Instituto Nacional de Estadística de Chile, 2011; Office for National Statistics, 2010) has been used, as it has been considered the most suitable for the research characteristics. This system basically allows to create different social position levels based on a matrix that crosses the **respondents father occupation and education level**, so the respondents with parents with lower occupation/education levels are included in the low/mid-low social position categories and, therefore, those with father's with higher occupation/education levels are included in the high/mid-high social position categories.

Father's data has been considered a more robust indicator to establish social position than mother's, as this family member is still the most habitual household holder. Thus, father's occupation/education level discriminates better the social position of the respondent. On those few cases where father's occupation or education level data was missing, the social position was established by the *per capita* income of the household. On those cases where this datum did not exist, social position has not been calculated (21 cases).

Two variables have been created regarding to social position, one with two categories (mid-low/mid-high) and the second one with three categories (low/mid/high). For the analysis, the results have been contrasted and crossed with these two variables, though, in general terms, the use of the variable of two categories has been prioritized when presenting data on this report.

Finally, it must be underlined that the previously explained social position calculation method has been prioritized above the respondent occupation/education level or household income,

as the young population still hasn't accomplished vital stages that can make this variables reliable enough to establish their real socio-economic position.

### 3.2 Qualitative methodology

The qualitative methodology is based on the premise that human action has a significant and meaningful nature. According to this premise, human actions aren't reducible to quantification. Hence, qualitative approach prioritizes the analysis of people's opinions and explanations. This methodology highlights the language as a meaning vehicle and comprehension and interpretation as the strategy to access to social phenomena. Its aim is, then, understanding the explanation collectives give to their own experiences and the reality they live in.

This research has been carried on using two different qualitative techniques: Focus Groups and Group Interviews. These techniques are group dynamics that use debate between participants to obtain the different knowledge and experiences related to the topics studied.

#### Focus Groups

The **target** of the Focus Group (FG) are young adults (aged 18 to 29) living in Porto, Bologna and Tarragona. **Six FG** have been held, two in each city, the first FG was composed by people from 18 to 23 years old, and the second one by people from 24 to 29 years old. The number of participants per city were the following:

- **Porto:** the first FG (18-23 years of age) was composed by 8 participants, and the second one (24-29 years of age) by 9 participants.
- **Bologna:** the first FG (18-23 years of age) was composed by 8 participants, and the second one (24-29 years of age) by 8 participants.
- **Tarragona:** the first FG (18-23 years of age) was composed by 8 participants, and the second one (24-29 years of age) by 7 participants.

Each group was **gender, socioeconomically and educationally balanced**. More precisely, the participants were half women and half men. They were from different neighbourhoods with different economic situation, and half of them were unemployed and the other half employed. Finally, the groups consisted of University students (or who had completed university studies), students of Vocational Education and Training or Certificate of Higher Education (or who had completed them), and young people who were not studying post obligatory education (or who hadn't completed post obligatory education).

## Group Interviews

The target of the Group Interview (GI) are professionals related to alcohol consumption field. **Three** GI have been held, one in each city. Concretely, the GI was composed by **Policy makers, Field workers** and **Local Police**. The participants of the GI were the following:

- **Porto:** The GI was composed by 1 researcher, 1 outreach worker, 1 decision-maker (Porto City Hall), 1 leader of Porto's University Students Association and 1 police form the local police of Porto.
- **Bologna:** The GI was composed by 1 medical doctor that works in the addiction field, 1 alcohol expert medical doctor, 1 professional educator expert of prevention projects and 2 representants of the Prefecture Drug Addiction Control Force (DACF) in Bologna (the director and a social assistant).
- **Tarragona:** The GI was composed by 2 policy makers related to public health of the City Council (Head of Health Department and of the alcohol area), 2 field workers intervening with young people (a social educator and a health education working with university students) and 1 police from the local police of Tarragona.

Qualitative research provides a description of social phenomena reported by the story of the participants, as well as the analysis of the information, the categorization and the interpretation done by the researchers. This methodology allows us to extract meaning structures to deepen the understanding of the studied phenomenon.

The qualitative data has been transcribed and, then, categorized. The categories used for the analysis are grounded on the empirical material, as well as the quantitative data. Thus, it has been possible to combine quantitative and qualitative data in an integrated and more complex analysis. The categories of analysis are the following: a) drinking patterns, b) Heavy Episodic Drinking pattern, c) Risky and protective behaviours, d) Consequences and effects of drinking and e) intervention.

## 4. RESULTS

---

This section contains the main results of the research carried out in Portugal (Porto), Italy (Bologna) and Spain (Tarragona). The results are based on the comparative analysis of the quantitative and qualitative data of each city. The comparison of the data allows as to point those aspects that are specific of each city, as well as those that are shared among the three

of them and, then, we can establish they are common characteristics of the Southern Europe area.

When analysing the data presented in this section, it should be noted that all prevalence refer to young people that has drunk at least once in the last year. The population was chosen based on the main objective of the research, which is studying the consumption patterns of young people who drink alcohol. Thus, as the population is not the whole young population, but youngsters who drink alcohol, one should be careful when comparing prevalence coming from other studies because they are usually based in a wider population.

This section is organized in five subsections, dedicated to five different topics. The first subsection includes the consumption patterns young people follow. The results related specifically to the Heavy Episodic Drinking are described in the second subsection. The third part addresses the protective and risky behaviours related to alcohol consumption. Finally, the consequences and effects of drinking are presented in the last subsection.

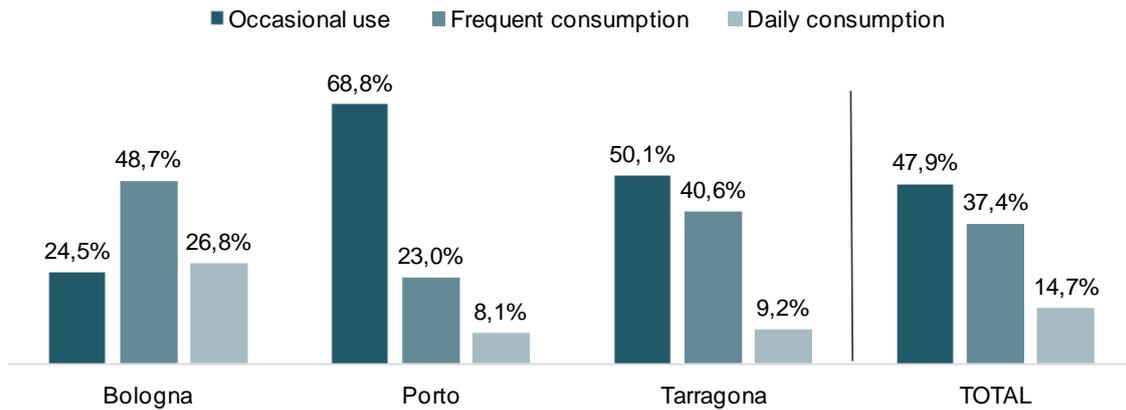
### **3.3 Consumption patterns**

In this section, we analyse the consumption patterns young people from Southern Europe carry out. Consumption patterns are the particular way people is used to behave when consumes alcohol. Consumption pattern includes, first, how often do people drink alcohol, that is, how many days a year do people drink alcohol. Secondly, when do people consume alcohol, which means which days of the week and at what part of the year do they drink alcohol. Finally, it also includes when do people drink and what kind of alcohol do they consume in each consumption context.

#### **How many days do young people drink alcohol?**

The figure 1.1 shows how often youngsters drink alcohol in each city, as well as the aggregate frequency for all three cities. Concerning to the frequency of alcohol consumption during the last year, three categories have been created: *occasional use* (from one to 99 days), *frequent consumption* (from 100 to 199 days), *daily consumption* (at least 200 days). The data distribution for these categories can be seen below:

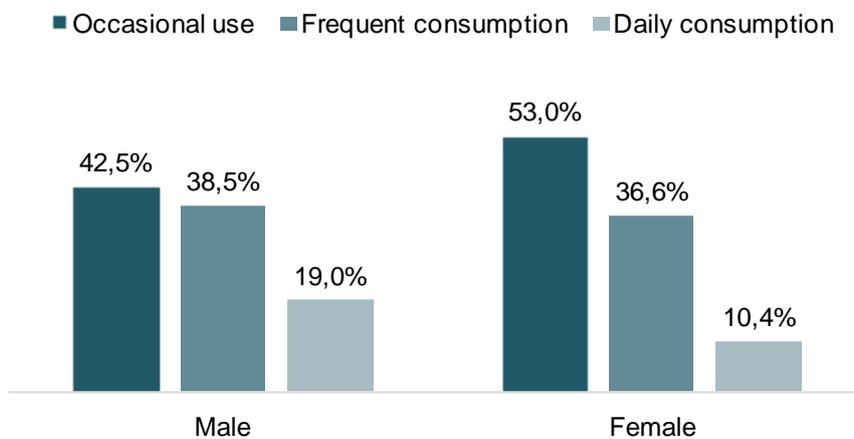
**Figure 1.1. Frequency of alcohol consumption. Last 12 months.**



According to the aggregate results of the three cities (last 3 columns) we can see how **the use of alcohol is common among young people who drink alcohol in Southern Europe**: 52,1% drink frequently or even daily. In other words, more than half of them drink 2 or more days a week. The other half of the young population (47.9%) drink occasionally, what means, approximately, 1 day or less a week.

**The differences between cities, though, are important.** Porto is the city where drinking alcohol is less common. As shown in the figure, only 23,0% of the respondents drink frequently; while this percentage rises to 40,6% and 48,7% in Tarragona and Bologna, respectively. By contrast, Bologna is where the consumption occurs more often, since 26,8% of the people drink daily; whereas in Tarragona and Porto this percentage is less than 10%. Moreover, the occasional use represents just the 24,5% of the people from Bologna; a percentage that increases to 68,8% and 50,1% in the case of Porto and Tarragona.

**Figure 1.2. Frequency of alcohol consumption by sex. Last 12 months.**



Regarding the frequency of alcohol consumption by sex, data reveals **men tend to drink more frequently than women**. In the *daily consumption* category (More than 200 days in the last 12 months) we find 19% of the men, and only 10,4% of women. Instead, 53% of women drink alcohol occasionally, 42,5% on men.

The results per city and sex maintain the same tendency. Thus, in each city, men always drink more frequently than women. Nevertheless, this difference between men and women only exist among those living in the same city. That is, when comparing men and women from different cities the territorial issue seems to have more weight, so the differences disappear. For instance, women from Bologna drink more frequently than men from Porto or Tarragona. In Bologna, 72,6% of women make a *frequent* or even *daily* consumption (that is, 100 or more days a year), while men from Porto and Tarragona have lower frequencies on this interval (39,5% and 54,8%, respectively). Moreover, women from Tarragona have a more similar pattern to men from Porto than women. Later on, this report the intensity of consumption will be analysed, where we will observe if these trends are maintained or not.

**In what concerns age, there are no differences, except in the case of Porto, where the drinking frequency increases significantly with age.** Finally, in what concerns social position, there are no significant differences between mid-low social and mid-high social position. The only difference that should be noted is that the percentage of mid-low social position youngsters that drink less than 19 days a year is higher than that of mid-high social position.

### **When do young people consume alcohol?**

As the previous section has shown, alcohol consumption is present among young people. Qualitative data show **alcohol consumption takes place during the weekend** (Friday and Saturday) in all the cities. Although alcohol consumption is mainly linked to night context, some people state they also drink **some afternoons during the week** after finishing class or work. In fact, as the quotation shows, young people decide when and how much they will drink depending on what they have to do the day after, since they need a day to recover from the over drinking. Then, being a student or having a job seems to influence when young people go partying and, consequently, when alcohol is consumed.

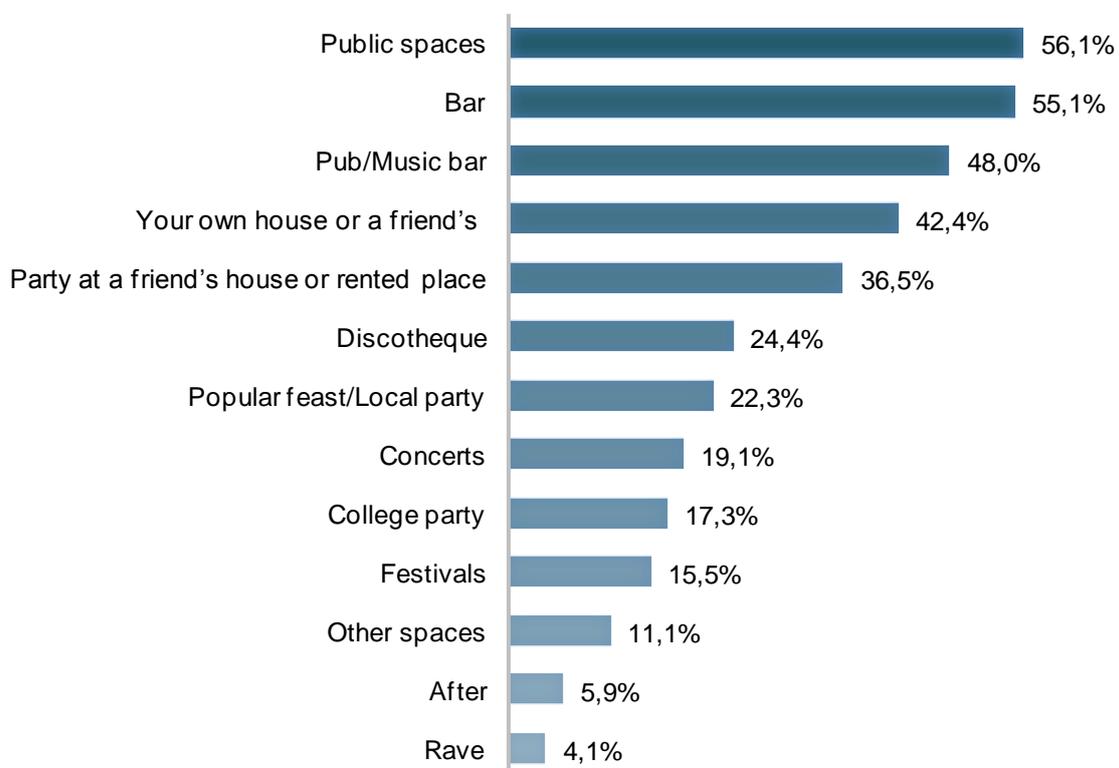
*«I, for example, go out on Friday more often because... as I work from Monday to Friday, then if I go out on Saturday, on Sunday I can't rest, so on Monday I'm not ready to work.»*

**Seasonality is another factor that influences alcohol consumption**, concretely, how much and where people drink. Alcohol consumption is not evenly distributed during year because during the summer youngsters drink more frequently. Friends meet more often when the weather is better, so they drink more. At the same time, the places where alcohol consumption takes place change, since they aren't obliged to stay in pubs or home because of the cold. Finally, it should be noted that youngsters report special events, such as birthdays, are occasions where alcohol consumption increases.

### Where do young people consume alcohol?

In what concerns context and leisure spaces, as shown on the figure bellow (aggregate values for all 3 cities), *public places* (56,1%), *bars* (55,1%), *pubs/music bars* (48%) and *the own house or a friend's* (42,4%) are the type of places where young people go out more frequently. Approximately, half of the sample has gone to these places often or always in the last 12 months.

**Figure 1.3. Places where they go out to. Last 12 months. Often or always.**



Interesting **differences have been found when analysing data per city**. In Bologna, free places where the studying community can meet have an important weight, and are significantly more important than in the other cities. Thus, public spaces (65,3%) own or friends' house (55,4%) and house party (44,7%) show higher presence in Bologna. All these

3 places seem to respond to a similar pattern based on the spontaneity and the co-management of the ludic environment by young people themselves. On the contrary, the presence of private places such as bars (59%) or discotheques (40,5%) is more relevant Tarragona, as well as events driven by public or private entities: local parties (42,3%), concerts (23,7%) and festivals (22,2%). Finally, while in Bologna and Tarragona we find a wide range of spaces where people go out frequently ( $\approx 50\%$ ), in Porto this variability is less marked. In this city, bars (56,3%) and public spaces (55,6%) are clearly the most frequented places, while the rest of spaces show significantly lower prevalence.

Despite the differences revealed by the quantitative data, young **people interviewed in all cities coincide fairly in the night tour they usually do**. They affirm it is common to start the night meeting with friends in public spaces, homes or bars (in Porto and Tarragona). In Tarragona, it is also widespread starting the night having dinner together, at home or in a restaurant, where they start to drink. Later, as the night goes on, they go to private places such as pubs, bars or, if they feel like dancing, then they go to a discotheque.

As seen in the quotation, youngsters usually start drinking in the cheapest places in order to spend less money. They buy alcohol in shops, where the alcohol is cheaper, a practice that is especially common among the youngest group (aged 18-23). Once they have drunk, they go to private places where they don't drink or just take a few drinks. It is also usual to bring the drinks near the bar or pub, so they can be outside the place drinking their own drinks, but enjoying the party.

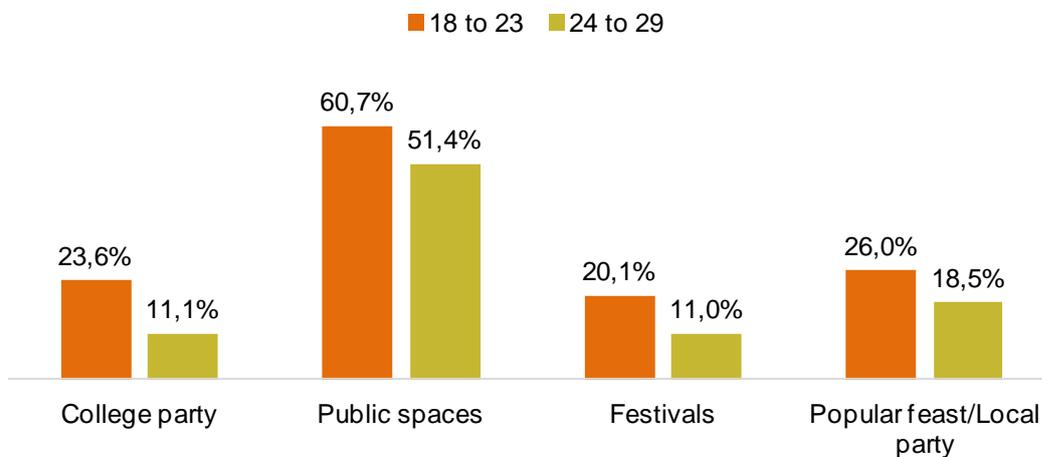
*"If I want to get drunk I drink at my friends' house during dinner and then we go out, in this way we don't have to spend money in the bars because they are too expensive"*

Qualitative data allows us to map the geographical, as well as the alcoholic night tour. Even though youngsters mention they drink all kinds of beverages (wine, beer, spirits, cocktails, etc.), whether they consume one or another kind depends on the place or the moment of the night. There are some differences between the countries in what concerns what they drink, but they all share they start with fermented drinks (beer or wine) and they add spirits (long drinks, cocktails, shots, etc.) as the night progresses.

There aren't any differences regarding the places young people go out depending on the sex. By contrast, **there are relevant differences by age group**. The youngest age group

(18 to 23) of Southern Europe goes to all the places more frequently than the oldest group (24 to 29). The figure below shows the places where the difference between age groups is more significant; these places are college parties (12,6 points gap), public spaces (9,3), festivals (9,1) and local parties (7,5).

**Figure 1.4. Places where they go out to. Last 12 months. Often or always.**



Although we can talk about a common pattern in all the cities, there is a worth noting difference related to bars. While in Bologna and Tarragona the oldest group goes more frequently to bars than the youngest, in Porto is upside down: 61% of people from 18 to 23 go often or always to bars, but in the case of people aged 24-29 the percentage comes down to 51,6%.

This imbalance between cities makes that there is not a significant difference on the assistance to bars regarding to age when we study the aggregate sample. Instead, when we split the data per city we find that in Bologna there are significant differences (55,6% on people 24 to 29, 44,2% on 18 to 23). Other places where we find significant intra-city differences per age are the discotheque in the case of Tarragona (46,9% on 18 to 23, 34,1% on 24 to 29) and own or friends house in Bologna (60,6% versus 50,1%).

**Regarding to social position, no important differences have been found** when analysing aggregate data, neither when combining social position with age or sex. That is, youngsters go out to the same kind of leisure settings, regardless of their social position. There are just a few differences when crossing social position with city. In Bologna, mid-low social position young people go more frequently to concerts than mid-high position (24,2% versus 14,3%) and to own or a friends' house (62% versus 49%). In Porto, they go more

frequently to afters (6,2% versus 1,5%), and in Tarragona they go more frequently to raves (5,9% versus 1,6%).

Finally, although social position doesn't seem to be an explicative variable, qualitative data shows money availability appears to determine where people goes and what they consume. Youngsters adapt their night to their available money. Having a bigger or lower amount of money determine what kind of alcohol will they consume, if they will buy it in a supermarket or in the club or pub, or even the quantity of alcohol they will drink.

### **3.4 Heavy Episodic Drinking**

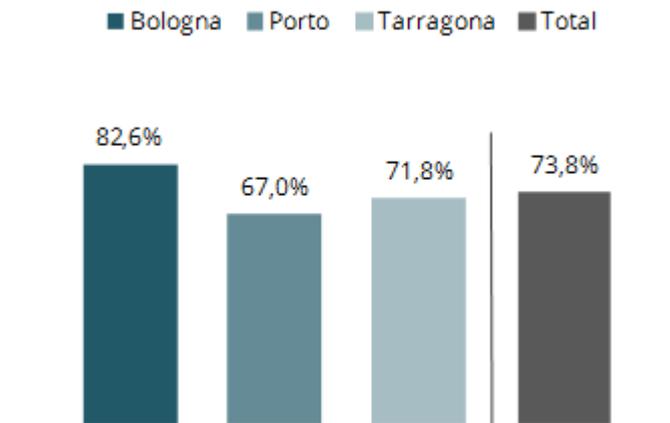
This subsection deals with Heavy Episodic Drinking (HED from now on). As it has been already exposed, HED is a complex term that presents several methodological controversies and it is calculated in different ways depending on the context or institution where it's used.

First, this section provides data related to a low-intensity HED, that is, drinking +4 or +5 drinks in one single occasion (e.g. a dinner, a party, etc.). Second, it exposes and compares these data with a more intensive HED, defined as drinking +4 or +5 drinks in two hours or less. These two ways of measuring HED are the most widespread among the scientific community that studies this phenomenon. This double vision will provide a richer analysis, since the first type of HED speaks about a more widespread and habitual HED, while the second one can be linked more clearly to risky practices and negative consequences.

#### **HED prevalence**

The next figure shows the percentage of respondents who have performed a HED episode in the last year by city (and also aggregate). When analysing the data, it should be noted that the population under study aren't youngsters, but youngsters who consume alcohol. In other words, those youngsters who affirm not drinking alcohol are not part of the sample. Therefore, the prevalence exposed in this section may be slightly higher than those related to the whole youngster's population.

**Figure 2.1. HED prevalence by city. Last 12 months. In one occasion.**



The aggregate data of the three cities reveals that the **HED prevalence in the last 12 months (one occasion) on the young alcohol drinking population is 73,8%**. However, it should be noted that the prevalence in Bologna is significantly higher than in Porto and Tarragona (82,6% versus 67% and 71,8%, respectively).

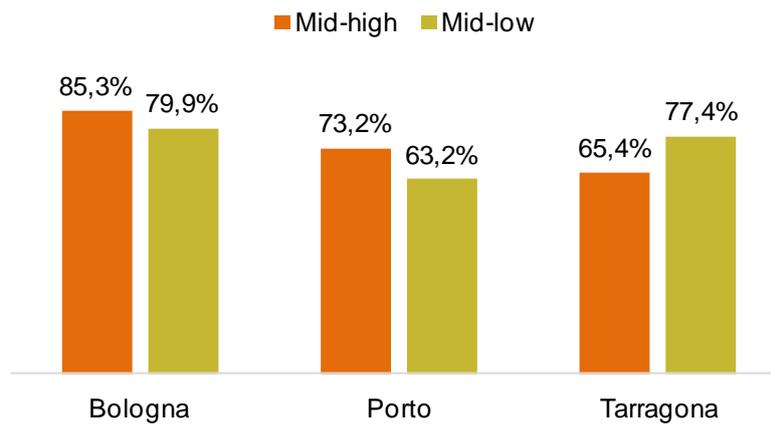
If we analyse the results by sex, data reveals **HED (in one occasion) is more prevalent among men than women** in Southern European cities (78,3% versus 69,2%). The difference between men and women is especially significant in Porto and Tarragona; while in Bologna HED seems to be quite extended regardless of the sex. As we will see later on, these trends regarding to sex and city will show some changes when putting the focus on the HED performed in *two hours or less* (high-intensity HED).

Age is another variable that influence HED. For the *one occasion* HED, the respondents from 22 to 25 are the ones with the highest prevalence. **There is a clear growing trend that reaches its peak between 22 and 25 years old and, after that, the trend is reversed.** 72,3% of the youngsters aged 18-21 has experienced a HED episode, a percentage that rises to 79,8% among those aged 22-25 and drops to 69,3% between 26 and 29 years old. In any case, it should be noted that Bologna has a great influence in this trend because it has higher prevalence. We find that the 91,1% of the 22 to 25 group has experienced HED in the last year in Bologna.

In summary, differences by sex have been detected in Tarragona and Porto, and differences by age groups (3 groups) have been detected for the aggregate data and especially in Bologna.

In what concerns to social position, no relevant differences were detected, as shown in the following figure.

Figure 2.2. HED prevalence by social position and city. Last 12 months



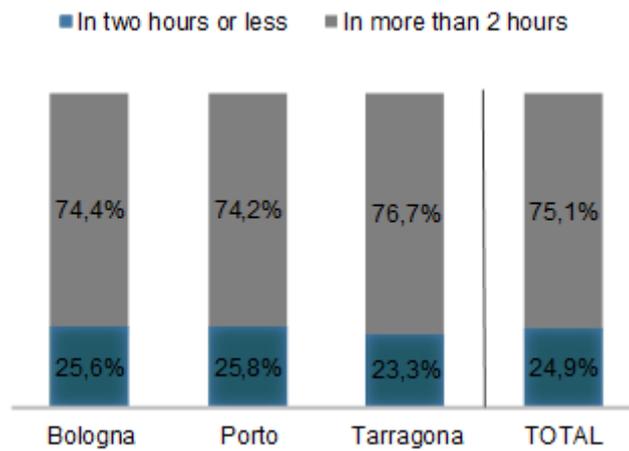
The relevance of the social position factor was one of the main hypothesis of this project. The socioeconomic variable was supposed to play a key role in the HED growing trend detected in Southern European countries, reinforced by the economic crisis these countries have suffered during the last years. Nevertheless, results show **it isn't possible to state that in Southern Europe social position is influencing whether young people performs HED episodes** or not. Data reveals social position is related to HED in opposite manners depending on the city. Thus, in Porto youngsters of mid-high social position conduct HED more frequently than those of mid-low social position (73,2% vs. 63,2%); while in Tarragona there is the opposite trend (65,4% vs. 77,4%). Finally, in Bologna HED is socially transversal phenomenon. In conclusion, the fact that data from different cities point in different directions makes it difficult to establish a clear relationship between social position and HED. Therefore, age, sex and territory seem to be much more explicative variables to understand HED prevalence than social position, as they show clearer trends for both aggregate data and data by city.

### HED by intensity

In the next section, we analyse HED data depending on the intensity it is performed. Only the cases of youngsters who have performed a HED in the last 12 months will be analysed (841 cases, 73,7% of the sample).

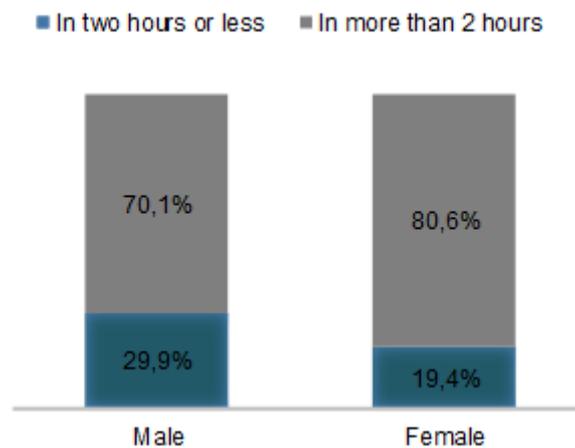
We compare the prevalence and the sociodemographic profile of those who have performed HED in two hours or less in the last time they did a HED versus those who did it in more than two hours.

**Figure 2.3. HED prevalence by city and time in which the HED is completed. Last performed HED.**



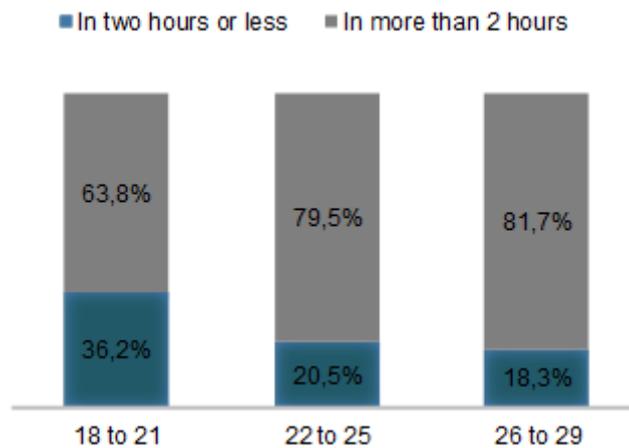
The figure above shows that 24,9% of the youngsters completed their last HED in two hours or less, while the majority (75,1%) did it in more than 2 hours. Even if the data show practically no differences by city, later in this section we will see how, when analysing the sociodemographic profile of the people who perform this type of HED by city, there are some differences.

**Figure 2.4. HED prevalence by sex and time in which the HED is completed. Last performed HED.**



As seen on the figure above, when analysing the higher intensity HED we find significant differences by sex. Thus, in the last performed HED, the 29,9% of men have completed it in two hours or less, while this percentage is reduced to a 19,4% in the case of women. The most significant difference between sexes is produced in Bologna, where 34,2% of men have performed their last HED in two hours or less, while this only have happened with the 16,5% of women.

**Figure 2.5. HED prevalence by age groups and time in which the HED is completed.**  
**Last performed HED.**



In the case of the age, the younger group has a more intense consumption of alcohol. In the last performed HED, the 36,2% of youngsters from 18 to 21 years old have completed it in two hours or less, while this percentage is significantly lower in the case of youngsters from 22 to 25 (20,5%) and even more with the ones from 26 to 29 (18,3%).

Therefore, when introducing the variable relative to the time in which the young people perform HED, the age trend changes. As we saw in the previous section, when we use a laxer calculation parameter - HED in one occasion at least one time in the last 12 months - the central age group (22 to 25) have the highest prevalence. Instead, when we are stricter with the parameters through which we analyse the HED and we pay attention only to those who have completed it in a reduced period of time (two or less hours) the younger groups, those from 18 to 21, have the higher prevalence.

In summary, **the younger they are, the faster they drink, so the HED episodes are more intensive among the youngest people.** As they grow, people perform more HED episodes, but less intensive, until they are 25. At that age, HED episodes start decreasing.

Some interesting tendency has been detected in the case of Bologna. While when analysing HED in the last 12 months in one single occasion (less intensive HED), differences by sex did not appear in this city but they did in Tarragona and Porto, the trend is reversed in the case of HED of two or less hours. In this case, the differences by sex are very pronounced in Bologna, and men (34,2%) perform this type of HED with a significantly higher frequency than women (16,5%). Meanwhile, in Porto and Tarragona men also show higher prevalence but with statistically non-significant differences. In the case of age, the same happens, Bologna is the city where the young people from 18 to 21 (41,7%) present more pronounced

differences when comparing two hours or less HED prevalence with those of 22 to 25 (16,4%) and those of 26 to 29 (20,1%).

Finally, it must be emphasized that **no differences were found by social position regarding to HED of two hours or less, neither in aggregate data nor by city.** This reinforces the results shown in the previous section, which prove social position is not as relevant as it was supposed to be.

### HED consumption pattern

When asked about the number of drinks consumed in the last HED they performed, **half of the youngsters (49%) are between 5 and 6 drinks consumed in one single occasion.** The range that goes from 4 to 7 drinks still groups a higher percentage of youngsters, reaching to the 79,3% of youngsters. The compared data has shown that in Porto is more common drinking a higher amount of drinks than in Bologna and Tarragona. Thus, in this city the 50% consume 7 or more drinks, while in Bologna (28,6%) and Tarragona (31,2%) the percentage of people on this range is significantly lower.

Regarding to the time that it takes them to complete HED, **the majority of the respondents are in a range of 3 to 6 hours (67,5%).** The behaviour of each of the cities in this topic is quite similar.

The collected data allows us to establish which is the most common HED consumption pattern. As shown in the following table, **drinking between 4 and 7 drinks in a range of 3 to 6 hours is the most common pattern.** That is, up to **57,5%** of the people who perform HED followed this pattern.

**Table 2.1. HED Pattern.**

	< 1 h	1 – 2 h	3 -4 h	5 - 6 h	7 - 8 h	9h <
10 drinks<	1,4%	3,8%	1,5%	1,2%	0,8%	0,2%
9 drinks	0,4%	0,9%	1,6%	0,3%	0,4%	0,0%
8 drinks	0,5%	1,6%	3,5%	2,0%	0,5%	0,0%
7 drinks	0,6%	3,2%	6,7%	3,5%	0,6%	0,6%
6 drinks	1,0%	3,8%	11,2%	5,8%	0,9%	0,5%
5 drinks	0,7%	4,4%	12,0%	6,8%	1,0%	0,9%
4 drinks	0,7%	1,6%	7,0%	4,7%	0,6%	0,6%

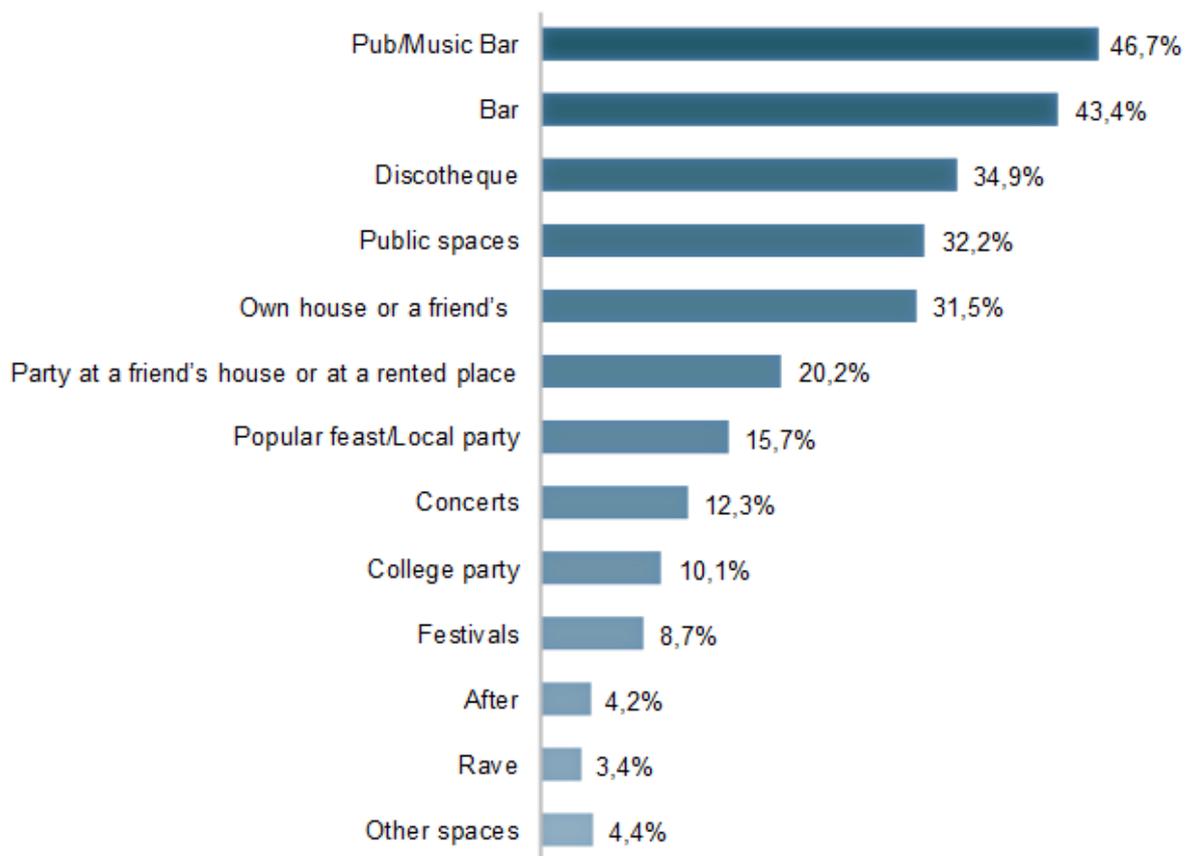
## How many days do young people experience a HED episode?

Of those who have performed a HED in the last 12 months, 50,2% affirm that they do it in a range that goes from 2 times a week to 2 times a month. In other words, we can assume that **half of the young people that perform HED do it almost every weekend**. This data shows how extended and habitual this alcohol consumption behaviour is between young people that drinks alcohol.

Although the compared data per city doesn't point important differences, we find that in Bologna the percentage of people that performs HED 3 times per week or more arrives to a 16%, quite higher than in Porto (10,5%) and Tarragona (9%).

## Where does HED take place?

Figure 2.6. Places where HED happens. Last 12 months.



**The main places where HED happens are the pubs and the bars.** 46,7% of youngsters that have performed HED during the last year affirm they have done it in pubs, and 43,4% in bars. At some distance, we find discotheques (34,9%), public spaces (32,2%) and the own house or a friend's (31,5%).

**Some relevant differences between cities have been observed.** In Porto, the pub or music bar is clearly the place where most of the HED episodes concentrate (58,3%), with a significant difference with Bologna (40,7%) and Tarragona (42,9%). Thus, Porto seems to have a more pronounced concentration towards this space, given the rest of the places in this city are below 40% prevalence.

Both in Tarragona (51,4%) and Bologna (46,3%) the bars are the most common places where HED happens, with a significantly higher prevalence than in Porto (31,4%). The discotheques are quite common in Tarragona (45,3%) and Porto (37,5%), but not that much in Bologna (23,8%). Instead, in Tarragona the HED in public spaces (22,9%) are significantly less frequent than in Porto (32,5%) and Bologna (40,1%). Other significant differences have been observed in parties at houses or rented places where Bologna is on the top of the 3 cities (27,1%), while local parties are more relevant in Tarragona (25,8%) and college parties in Porto (21,6%).

As explained before in this report, Bologna seems to have a more marked tendency to an alcohol consumption more based on the spontaneity and the co-management of the ludic environment by young people themselves.

The following figure compares, sorted from highest to lowest frequency, the places where people go out with the locations where HED is performed, showing differences regarding the use of spaces.

**Table 2.2. Comparison between party and HED places.**

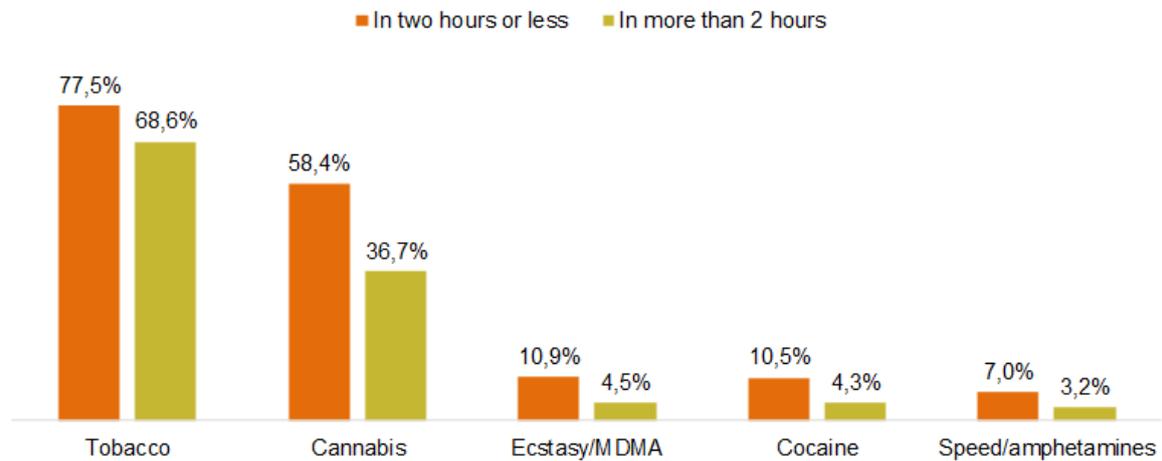
	Places where they go out to	Places where HED happens	
+ ↑ ↓ -	Public spaces	Pub / Music Bar	2↑
	Bar	Bar	=
	Pub / Music Bar	Discotheque	3↑
	Own house or a friend's	Public spaces	3↓
	Party at a friend's house or at a rented place	Own house or a friend's	1↓
	Discotheque	Party at a friend's house or at a rented place	1↓

Thus, we can observe discotheque, public spaces and pub/music bars are the places that present highest differences. On one hand, discotheques climb three positions, while

pub/music bars rise two. On the other hand, public spaces public spaces fall to the fourth position when talking about where HED takes place.

## HED and other substances consumption

**Figure 2.7. Prevalence of substance consumption in the last 30 days by time in which the last HED was performed.**



The figure above illustrates the consumption of substances in the last 30 days, depending on the profile of HED intensity, that is, those who performed the last HED in two or less hours versus those who did it in more than two hours. **We can observe a correlation between the intensity of alcohol consumption and the consumption of other substances.** The group with a higher intensity consumption (on the last HED) shows a significantly higher prevalence in the intake of all substances in the last 30 days.

Nevertheless, it must be remarked that this significant difference for the all 3 cities aggregate analysis is caused because of the weight of Tarragona and Porto, given that Bologna doesn't fulfil this correlation. Independently of the alcohol consumption pattern, Bologna's youngsters are the ones that most frequently have consumed every substance in the last 30 days, and this frequency and pattern of substance use does not appear to change depending on intensity level of HED.

### 3.5 Risky and protective behaviours

This block consists of the analysis of the protective and risky behaviours youngsters conduct in the Southern European cities. Firstly, we expose the prevalence of risky and protective behaviours among young people who drink alcohol in the three cities. Then, we present the differences depending on sociodemographic variables. In third place, we expose the prevalence for the people who perform HED. Finally, we delve into a difference between cities considered relevant to understand the management of the alcohol consumption.

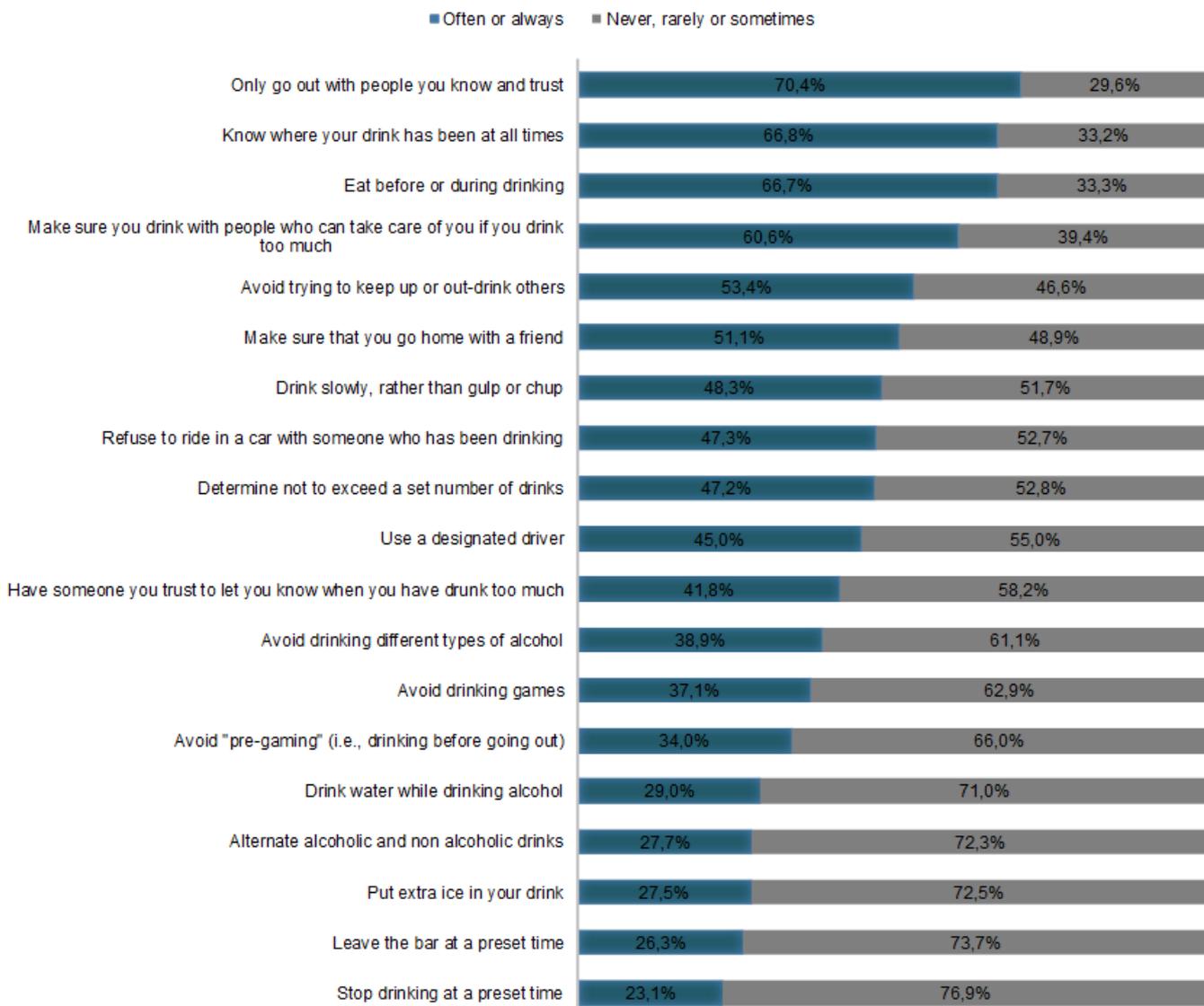
Before we get started, it is relevant to define what does protective mean. **Protective behaviour** refers to those consumption behaviours – individual and collective – that limit alcohol consumption or minimize its social and health negative consequences. On the contrary, **risky behaviours** are consumption behaviours – individual and collective – that are potentially dangerous or harmful, or may cause negative consequences in social and health levels to a person or the people around herself. The same behaviour can be risky or protective depending on whether it is carried out or not. For example, refusing to ride a car driven by someone who has been drinking is a protective conduct; while riding a car driven by someone who has been drinking would be a risky behaviour.

As exposed in the methodology section, risky and protective behaviours included in this research have been elaborated following the proposal by Vldar, Lee, Stearns and Axelrod (2015). These authors suggest three large categories to organize risky and protective behaviours: a) **serious harm reduction**; b) **manner of drinking**; and c) **limiting and stopping drinking**. The analysis that follows is based on this proposal.

#### Presence of risky and protective behaviours

The following figure shows the presence of protective and risky behaviours among young people in Porto, Bologna and Tarragona. It must be noted that to analyze this section all the sample will be used again, that is, youngsters that at least have consumed alcohol one time in the last 12 months (1141 cases).

**Figure 3.1. Presence of protective and risky behaviours. Last 12 months.**



As shown in the previous figure, 6 of the 19 analysed protection behaviours are carried out *often or always* by more than 50% of respondents. The next 7 behaviours are carried out by between 35% and 50% of people. Finally, 6 behaviours are always or often conducted by less than 35% of people, becoming risky behaviours to more than 65% of respondents. The behaviours in the figure can be grouped in the three large analysis dimensions presented before: a) serious harm reduction; b) manner of drinking; and c) limiting and stopping drinking.

## Most frequent protective behaviours

When analysing the data, we observe that **behaviours with prevalence of 50% or higher** (for the *often or always* category) **are mainly linked to serious harm reduction dimension**, namely, behaviours that contribute to reduce significant negative consequences arising from alcohol consumption. These behaviours include going out with known and trusted people (70,4% of respondents carry out this strategy often or always), knowing where your drink has been at all times (66,8%), eating before or during drinking (66,7%), making sure you drink with people who can take care of you if you drink too much (60,6%), avoiding trying to keep up or out-drink others (53,4%) and ensure going back home with a friend (51,1%).

The qualitative data show **eating before drinking is a frequent protective strategy** because youngsters usually have dinner together before going out. Young people from Southern European cities usually start the night having dinner at a restaurant or in someone's house. These patterns contribute to making eating before drinking one of the most present protective behaviours. Qualitative data seem to indicate this practice become more common among youngsters aged 24-29, despite quantitative data can't prove this specific datum.

Albeit this practice seems a protective behaviour, some interviews add a nuance to this analysis, suggesting that it may be a risky behaviour. They argue sometimes having dinner is an excuse to start drinking. First, because some restaurants offer special offers and second because some youngsters meet at home in order to save money having dinner and drinking before going out. Following this hypothesis, having dinner would promote HED.

*«If I want to get drunk I drink at my friends' house during dinner and then we go out, in this way we don't have to spend money in the bars because they are too expensive»*

*« P5: When you have already brushed your teeth!*

*P4: Before! Aquarius and something to eat. Always! (...)*

*P2: I have proven, at least in my case, if I eat before going to sleep and drink water, just a little while eating, something normal, the next morning I get up much better than if not. »*

Finally, the qualitative data reveals that some young people eat when they return home after the party. This practice wasn't included in the questionnaire, but it seems to be widespread among some youngsters.

### Frequent protective behaviours

The next set of behaviours included in the figure - with prevalence between 50% and 35% for the *often or always* category - don't present such a clear pattern, since the behaviours included belong to different dimensions. However, in the top of this set of behaviours we find drinking slowly, rather than gulp or chup (48,3%), or avoiding drinking different types of alcohol (38,9%), belonging to the *manner of drinking* dimension; and determining not to exceed a set number of drinks (47,2%) which is the most prevalent behaviour from the group of *limiting and stopping drinking* dimension.

Regarding the protective strategy avoiding drinking different types of alcohol, interviews bring to light a controversial reality. **Most young people are aware that mixing different types of alcohol is harmful** and can have negative consequences. Nonetheless, **most of them drink different types of drinks during the night**. On the one hand, they affirm they know the drinks they stand better, so they try to order only those ones. Moreover, as they get older, they have more experience on negative consequences and they avoid mixing different types of alcohol more frequently.

*«P3: They know that if they mix, then the hangover is terrible, the puke or the illness then... But the youngest ones: I drink even the geranium's water! But when you have already had some drunk experience, and some puking, at the end if I go on with rum, I go on with rum (...) then, they take the long drink always with the same. Well, if it's 4 o'clock in the morning and you want to keep drinking and there is what it is left, I think that I also end drinking whatever, but my first intention is not mixing»*

As we will see, it is corroborated by the quantitative data, since avoiding mixing increases from 33,1% to 44,8% with age. On the other hand, as stated earlier, as the night passes, youngsters tend to drink different types of alcohol. That is, frequently they mix from the lower to the upper alcohol content, starting with fermented beverages (wine or beer) and later on changing to distilled drinks (long drinks, shots...). In addition, in the interviews appear certain situations that make it easier to end up mixing different types of alcohol. One that appears repeatedly is making a round of shots or invite someone to a shot.

Finally, the last protective behaviour mentioned (*determining not to exceed a set number of*

*«What I drink depends on how much money I have in the pocket»*

*drinks*) is not always carried out exactly as a rational decision took before the party starts. During the interviews, some youngsters report they can't stop drinking after a set number of drinks even if they plan it. For this reason, some of them go out with a defined quantity of money. They make sure not to exceed a limit of alcohol and, at the same time, they save money. By contrast, some others expose if it is a night to party, mostly in weekends, there is not a limited amount of drinks to be consumed. Therefore, as the quantitative data reveals, these protective behaviours is conducted in half of the youngsters.

### **Less frequent protective behaviours**

Finally, in the bottom of the figure 3.1. we find **those behaviours that are *always or often* conducted by less than 35% of people, which are related to *limiting and stopping drinking*** dimensions. Basically, it includes strategies linked to limiting drinking, such as alternating alcoholic and non-alcoholic drinks, drinking water or putting extra ice on the drink. It also includes other strategies that aim to plan the night and when people will stop drinking, such as leaving the bar and stop drinking at a pre-set time.

In this set of behaviours (<35%) we also find the issue of combining alcohol and marihuana. Between those who declare that have consumed cannabis during the last year we find that the 25,9% avoid mixing it with alcohol often or always. This means that 1 in 4 people who consume cannabis don't mix it with alcohol. This fact strengthens the idea that, although there is a relation between substances consumption and intensive HED, it is not necessarily occurring at the same time.

Throughout the interviews, it is specified that youngsters don't make an exact planning of their "night out". On the one hand, some people affirm they don't decide what they will do, but they prefer to improvise, thus favouring the unexpected. They don't have a limited amount of drinks to be consumed, neither an hour to return home. On the other hand, other young people tend to do a kind of general planning of the night. Often, they don't determine a certain number of beverages, but decide about what kind of night they want (a lively or a quieter night), or they just decide depending on the group of friends they are with.

*« E: Then, you decide what you drink according to the decision you took before!*

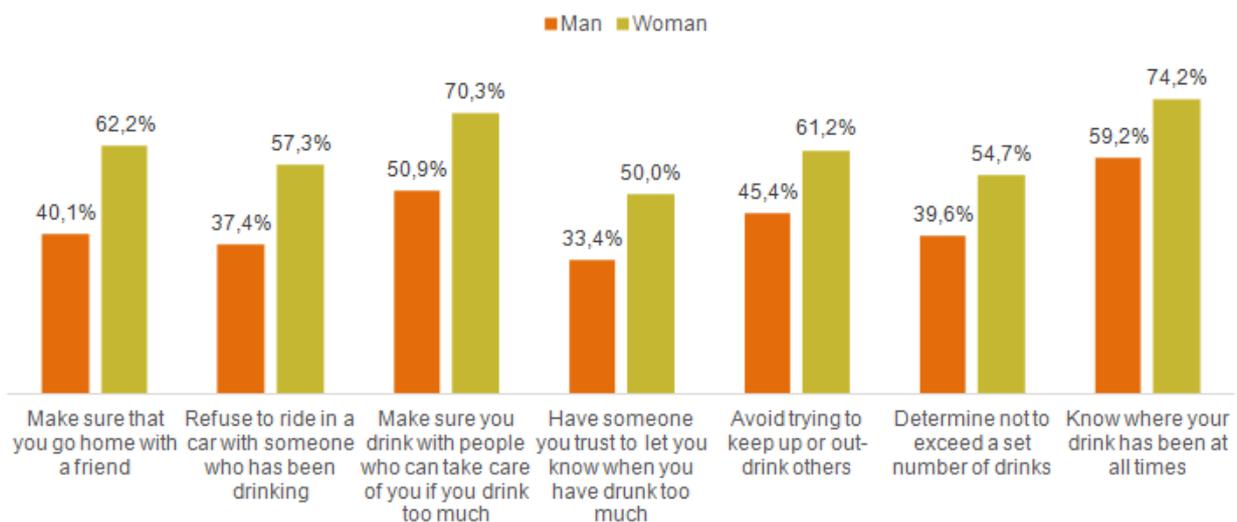
*P1: No, here's the thing, I don't think what I'll drink. If I say, this night at full speed (...)*

*P1: Well, I don't say: I'll only drink three glasses of wine! It is more like... as it comes, because there are days that with only two glasses you go: puuuf! And days that two glasses do nothing to you. But if I know that with two glasses is... wow, I'm starting to get drunk! And I don't want to party hard that night, I stop.»*

Finally, in some interviews participant affirm another strategy they use instead of planning, is paying attention to signs and body sensations to decide whether to limit alcohol consumption. It doesn't consist of having a pre-set number of beverages, but considering how they feel to decide whether to keep drinking, wait before having the next drink or stop drinking.

### Sociodemographic differences

**Figure 3.2. Presence of protective and risky behaviours by sex. Last 12 months. Often or always.**



The analysis by sex points out important differences. **Women tend to carry out all the protective behaviours more often than men.** The average difference between women and men for each behaviour analysed is 11,4 points. In the figure above we show only those behaviours in which the differences are particularly high (>15 percentage points). Those strategies related to create a trustworthy and confidence context when going out seem to be the factors that the women take into account much more than men, such as making sure that you go out with a friend (62,2% on women versus 40,1% on men), refusing to ride in a car with someone who has been drinking (57,3% vs. 37,4%), making sure you drink with people who can take care of you if you drink too much (70,3% vs. 50,9%) or having someone you trust to let you know when you have drink too much (50% vs. 33,4%), among others.

The age also points out some differences, though these aren't as large as the differences by sex. **The oldest age group (24 to 29) perform more frequently the protective behaviours,** especially those related to the manner of drinking. That is, the behaviours with a wider difference between the youngest (18-23) and the oldest group (24-29) are related with harsh drinking, such as avoid trying to keep up or out-drink others (61,1% on the 24 to

29 groups, 45,6% on the 18 to 23 group), drinking slowly, rather than gulp or chup (55,1% vs. 41,5%), avoid drinking games (43,8% vs. 30,5%), or avoid drinking different types of alcohol (44,8% vs. 33,1%). It should be noted that age differences are even more pronounced in the case of women, that is, protective behaviours increase significantly on women as they get older, while on men this evolution is only significant for a short group of behaviours. Therefore, **the population group that put into practice more protective behaviour is women aged 24-29 years old.** Consequently, differences between men and women are not reduced with age, but expanded.

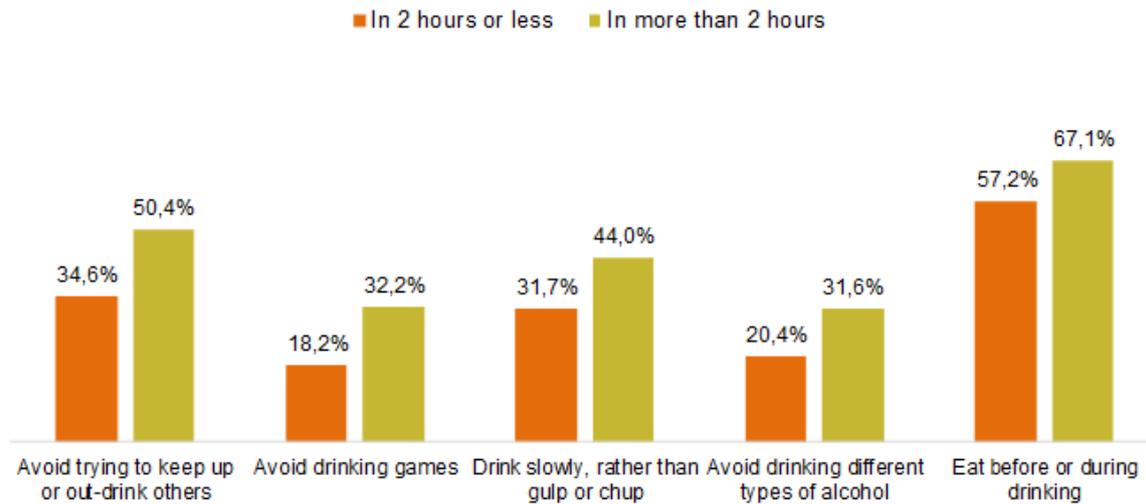
Differences by social position were detected only in a few behaviours. Nevertheless, these slight differences don't allow to establish a differential pattern regarding to social position and protective behaviours. This proves social position is not an explicative variable of drinking behaviours and it refuses one of the hypothesis of the project, that focused on socioeconomic variables to understand the consumption trend in Southern Europe.

Regarding to data by city, it should be noted that, in general terms, **young people in Bologna conduct protective behaviours somewhat less frequently**, although they are the ones who most often consume alcohol and have a higher HED prevalence. Youngsters in Bologna perform each protective behaviour (*often or always*) with an average 41,6%, while this value increases to 46,2% in Tarragona and to 46,8% in Porto.

It is worth mentioning that the only behaviours in which Bologna's prevalence are significantly higher than Porto and Tarragona are putting extra ice in the drink and drink water while drinking alcohol. That is, two protective strategies related to limiting or stopping drinking dimension. On the other hand, Tarragona has significantly higher prevalence in what concerns to establishing pre-set times for both stop drinking and leaving the bar at a pre-set time.

## Presence of risky and protective behaviours depending on the HED level

Figure 3.3. Presence of risky and protective behaviours by intensity of HED. Last 12 months. Often or always.



Although protective behaviours could help to avoid some negative consequences caused by HED among those who have made an intensive HED, **the data prove intensive HED group carries out less frequently all the protective behaviours**, unless one. The figure 3.3 shows the protective behaviours where we find most significant differences (>10 percentage points) between two HED groups, the youngsters that have performed the last HED in two hours or less versus the ones that have done it in more than two hours. The major differences are behaviours related to the manner of drinking, such as avoiding drinking different types of alcohol (15,8 points difference), avoiding drinking games (14), drinking slowly (12,3) and avoid drinking different types of alcohol (11,2).

### Collective versus individual strategies

So far, the qualitative data has been presented together regardless of the city. Most of the information appears in all the three cities, so it is useful to understand and illustrate the quantitative data. Nevertheless, analysing the interviews emerges two different ways of managing alcohol consumption: one collective and other individual. This difference between cities is crucial to understand how and why protective and risky behaviours are carried out by young people, as well as to plan any intervention addressing this topic.

In Tarragona, young people put into practice several collective strategies to stop friends from drinking too much or react when they have already done it. That is, many protective behaviours, as well as the management of the negative consequences are carried out collectively. For instance, they mention taking their beverage away, telling them there is no drink left, walking the person to his/her home, or being at their side while they recover. The mentioned strategies show it is usual that the group organizes itself to take care of those who are drinking too much or who are already drunk. In short, responsibility and management of the consequences that may occur due to drinking lie with the peer group and not the individual.

*«Yeah, he is my friend. Then I told him: Stop drinking! And he says: sure, sure, sure. But you can see he is drunk and keeps going to the waitress. So, then, I tell the waitress, even if I don't know her, and I tell her hey don't give him more, he is wasted. And if he stills tries to, at the end it is not the waitress problem, she says, so what do I tell her? I say: give him water. Then what does he do? He puts the long drinks because he is so drunk and he doesn't realize and I change them and I put a glass with water with ice and he doesn't realize. »*

**Tarragona's young people manage and take care tasks collectively**, since these tasks are undertaken by all members of the peer group. It should be noted that not all collective practices they perform are necessarily appropriate. However, the fact that most of them are carried out in group indicates there is a collective logic in the drinking culture present in Tarragona.

By contrast, in Porto, people affirm that self-regulation is something personal that should be managed individually. In fact, they rarely take a look to someone during alcohol consumption in order to control their consumption. Some participants state they realize that a friend has overdrunk when he/she is already very inebriated and, then, it is too late to prevent negative consequences. Accordingly, **the management of alcohol consumption and its negative consequences is an individual responsibility**. In this sense, there is a widespread idea of individualism that materializes in a lack of collective protective practices and care among the peer group.

*« If I have to go out to be the mommy or the educator I prefer staying at home »*

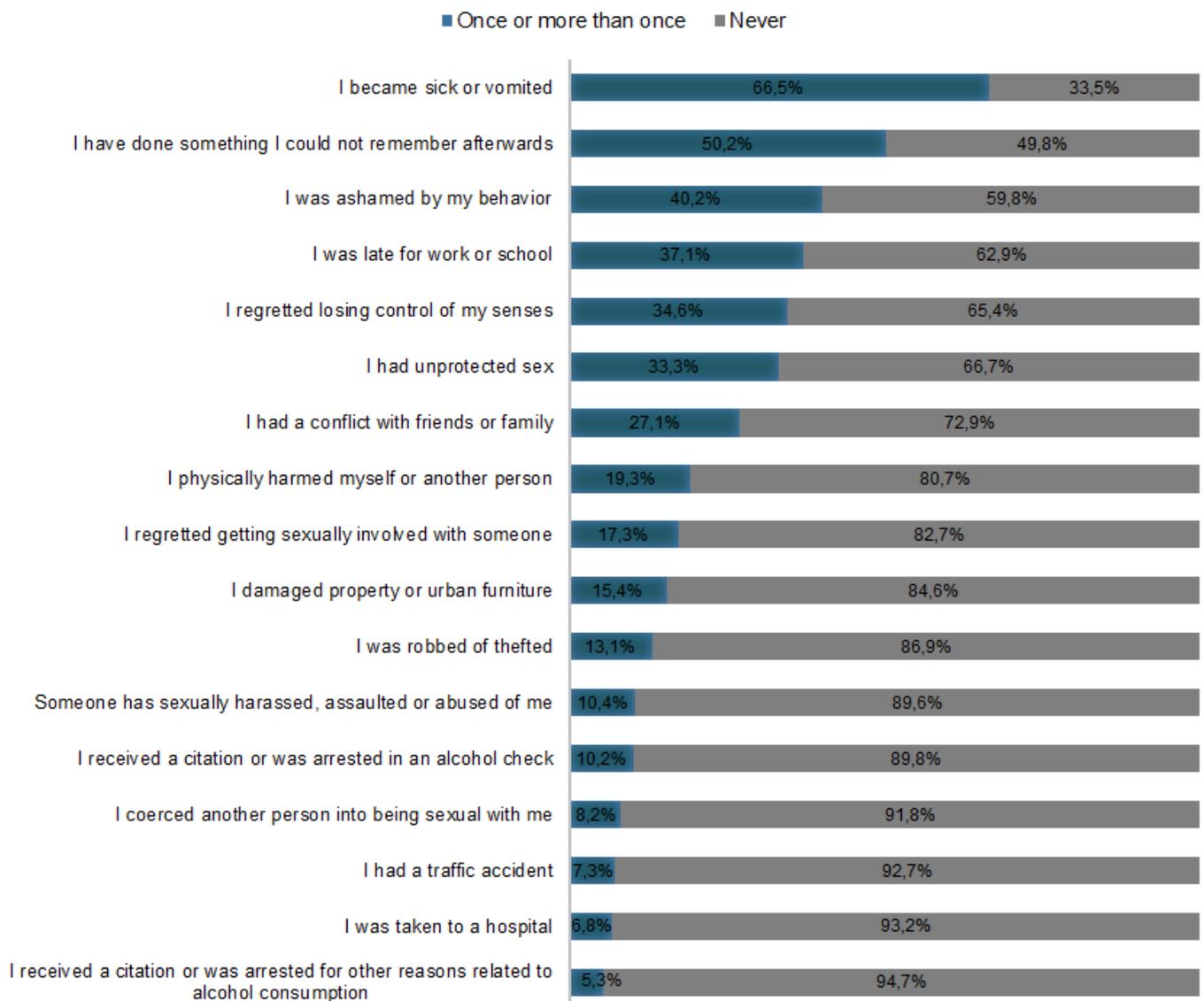
Consequently, qualitative data seem to indicate it is difficult to establish a common pattern in Southern European cities. On the contrary, there are two opposite manners to manage alcohol consumption and its negative consequences. While in Tarragona there is a collective culture of drinking, in Bologna, the drinking management is an individual issue.

### 3.6 Consequences and effects of drinking

This section exposes the negative consequences and effects of alcohol consumption among young people who drink alcohol. The section begins by presenting the more and less frequent consequences for the entire sample and it follows exposing the main sociodemographic differences. Finally, it presents frequencies particularly for those who have conducted a HED episode.

#### Presence of consequences and effects of drinking

Figure 4.1. Situations experienced as a result of drinking alcohol. Last 12 months.



As seen on the figure above, **the most common consequences are associated with physical discomfort and feelings of shame, rejection and conflict with others.**

The most frequent consequence is becoming sick or vomiting which has been experienced one or more times by 66,5% of people in the last 12 months. The second one is doing something you cannot remember afterwards (50,2%). Physical consequences can be suffered the same night, as well as the day after the party. In both cases, the management and the problems related to the consequences are different.

In what concerns the negative effects suffered during the night, some participants - specifically from Tarragona- point out **the main concern is not directly related to the physical sensations of discomfort, but to how consequences affect their friends.** As it has been exposed in the previous section, in Tarragona there is a collective management of alcohol consumption effects.

*«There is people who are having an eye on you and you are spoiling their night and the other way around. It has happened to me, having friends that get sick and, obviously, you stop partying, you stay with her and bring her home, you shower her, you have to do everything for her and that night is like it has ended in a different way. »*

Consequently, as shown in the quotation, if someone exceeds consumption the peer group will assume the responsibility for taking care of the one feeling sick, for instance: walking the person to his/her home, being at his/her side while he/she recovers, etc. That's why some young people in Tarragona highlight that the main problem related to physical consequences is interfering in the development of the night of their friends. Given that this collective responsibility has just appeared in Tarragona interviews, this concern maybe is not common among young people from other Southern European cities, but just from Tarragona.

Regarding the consequences suffered the day after the party, young people mention hangovers (headache, body aches...) is one of the most undesirable effect of abusing alcohol. They refer to the

if we focus on the consequences suffered the next day, young people from the different cities agree. Apart from the discomfort, they highlight that feeling ill has negative effects on daily tasks, so it is related to other consequences such as being late to work or school (which has a frequency of 37,1%). In addition, some people affirm as they grow up, the recovery time needed is extending, making this consequence worse.

Some other consequences that have a high frequency are being ashamed by your behaviour (40,2%), regretting losing control of the own senses (34,6%) or having unprotected sex (33,3%).

A usual cause of shameless mentioned throughout the interviews is certain behaviours performed during the night because of the state of disinhibition caused by alcohol consumption. This emotional state is described in positive terms as well and thus part of the pleasure of being drunk. However, it has also negative consequences because these behaviours are usually reinterpreted as inappropriate the day after, causing shame. Moreover, the disinhibition can favour loosing up, sincerity or aggressive behaviours. This can cause social conflicts and, in some cases, discussions and fights. Consequently, several youngsters affirm they usually have feelings of **regret for having argued with friends during the night.**

*«What has happened to me several times is getting angry with someone, you become more aggressive (...) So alcohol helps you to channel the problems in some way or another. I mean, it doesn't help you, it's the opposite. When you are drunk, you channel them in a way that maybe it isn't the most appropriate and (...) you feel quite bad the next day when you*

Qualitative data, then, shows social and relational consequences are considered one of the most negative kind of consequences. Even those consequences categorized as physical have a social effect, which is especially relevant for young people.

After this group of consequences, we find situations that may involve small crimes or misdemeanours, such as physically harming myself or another person (19,3%), damaging property or urban furniture (15,4%) or being robbed or thefted (13,1%). Some of them can also be linked to regret and shame, but others are just related to violent reactions.

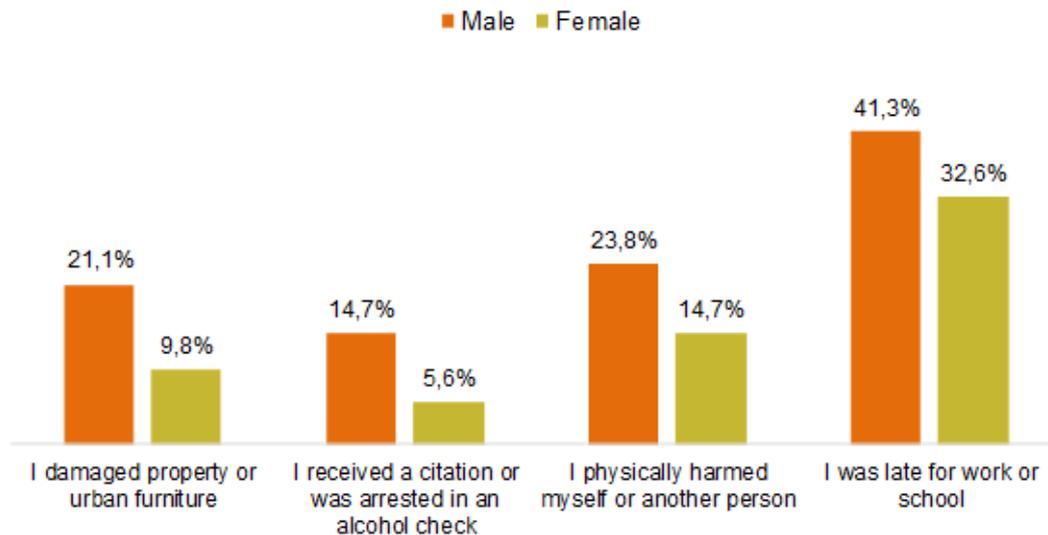
Finally, the last section of the figure focuses on more serious consequences, most notably being sexually harassed, assaulted or abused, which has been suffered once or more by 10,4%, or receiving a citation or being arrested in an alcohol check (10,2%).

### **Sociodemographic differences**

If these data are analysed depending on sociodemographic variables, we find some relevant differences regarding sex and age. **Differences by sex regarding to the alcohol consumption are important.** In 14 out of the 17 analysed alcohol consumption consequences, men are above women (for *once and more than once* prevalence). In the next figure, we can see those consequences in which the differences are larger, namely, damaging property or urban furniture (11,4% percentage points difference), receiving a

citation or being arrested in an alcohol check (9,2%), physically harming oneself or another person (9,1%) and being late for work or school (8,7%).

**Figure 4.2. Situations experienced as a result of drinking alcohol by sex. Last 12 months. Often or always.**



Even if it is not showed in the figure, it must be underlined that being sexually harassed, assaulted or abused has affected once or more than once in the last year to the 15,3% of women (5,5% on men). Regarding to age, the women from 18 to 21 are the ones that most commonly have been in this situation (20,8%) while the prevalence decreases with age (13,6% on women from 22 to 25, 11,3% on those from 26 to 29). We also find differences by city, given that in Tarragona the 25,7% of women have suffered it often or always during the last year, significantly more often than in Porto (13,6%) and Bologna (7,1%). Although the differences by social position are very small in Porto and Bologna, it should be noted that in Tarragona these are large: 40,7% of women of mid-high social position have suffered it in this city, while this percentage decreases to 13,1% in the case of mid-low position women.

Some interviews allow to understand deeply the categories of abuse, sexual assault and harassment, as well as see how young women report these situations. In Tarragona interviews, all the girls affirm harassment is present during the nights in different forms. The most reported types of aggression are touching without consent or repeated insistence by boys. It is also mentioned that some boys try to flirt with girls who are under chemical vulnerability, mainly under the influence of alcohol, since they want to take advantage of her situation.

There are diverse strategies and reactions to these situations. On one hand, some men tend to react showing disagreement; but others just go away from the harassment situation, especially when they have friends involved in one and they don't know the girl. On the other hand, girls have multiple strategies to minimize any variable that could increase the chances of suffering harassment (wearing tight clothes, being aware of how they talk or dance). Their reactions, as men, include ignoring the man and moving away, but also confront him.

*«P1: Or knowing that one night, depending on how you dress, you know that they are going to tell you things, and this and that, and you also have to think about that before going out because you, no seriously, as a girl*

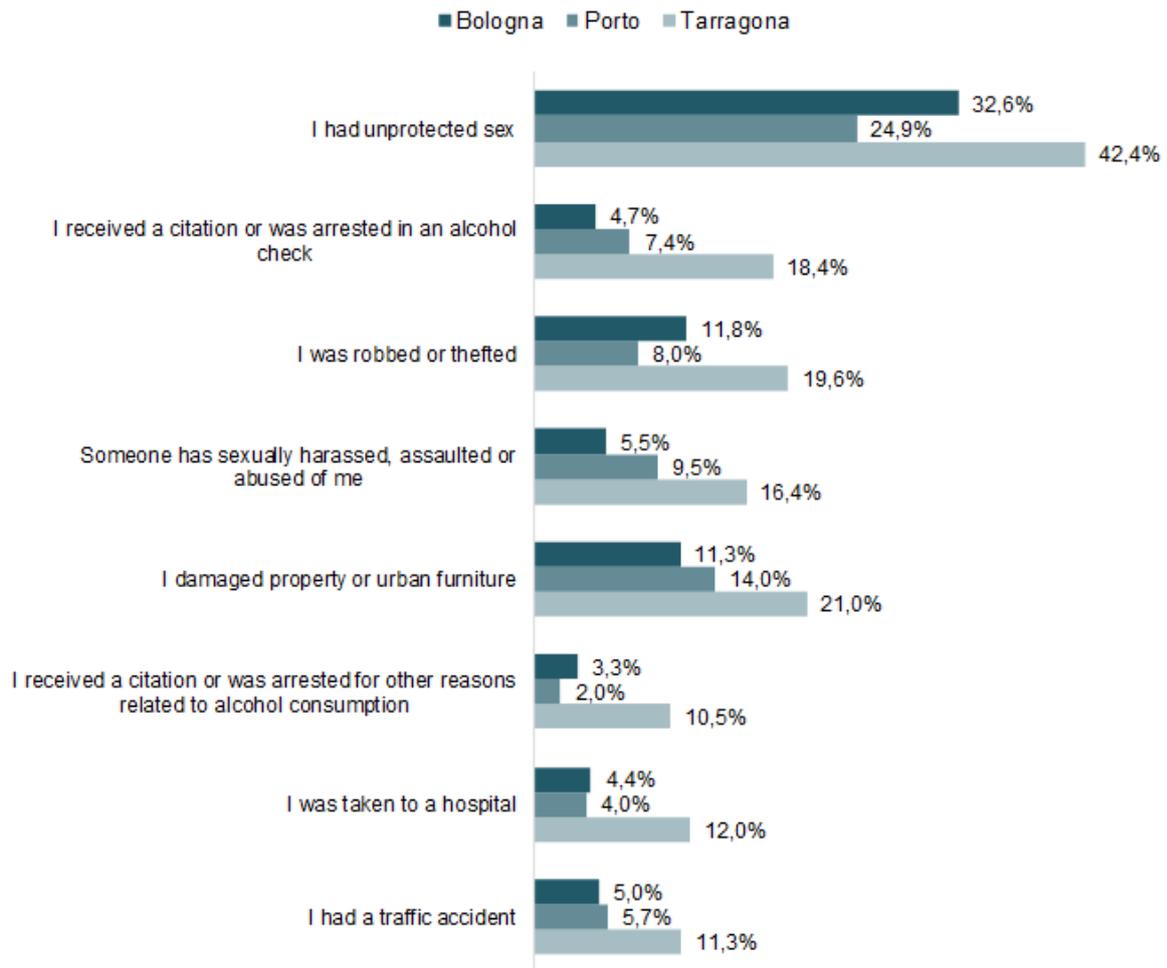
*E: ha ha ha*

*P1: I'm not saying that you wear a cleavage to the belly button, but if some night you decide to wear a tight dress, you know that night you are going to have boy bothering you by sure, right?» (24-29)*

In what concerns to the age, the differences are also important. **In 16 out of the 17 analysed alcohol consumption consequences, youngsters from 18 to 23 are above the ones from 24 to 29 (for once and more than once prevalence).** The behaviours in which the differences are larger (between 13 and 7 percentage difference between the 2 age groups) are: being late for work or school, doing something they don't remember afterwards, being ashamed by the own behaviour, becoming sick or vomiting, physically harming oneself or another person.

It must be noted that the main differences by age groups are mainly caused by Tarragona, in this city the differences regarding to alcohol consumption consequences by age are very important, in fact, in 14 out of the 17 analysed consequences these differences are statistically significant, while in Porto and Bologna the majority of the consequences don't show significant differences per age.

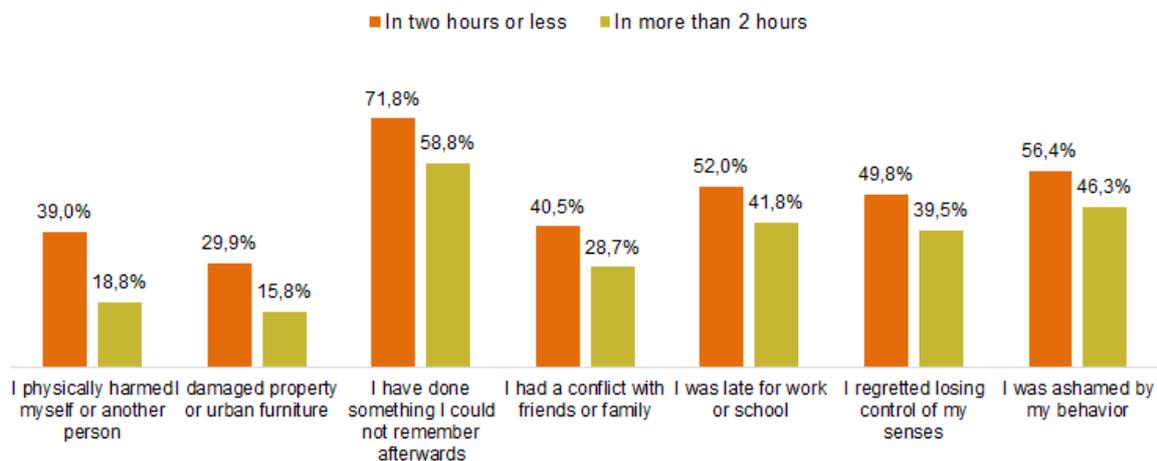
**Figure 4.3. Situations experienced as a result of drinking alcohol by city. Last 12 months. Often or always.**



Independently of the age issue, when comparing alcohol consequences by city, **Tarragona appears to have higher prevalence in the majority of the alcohol effects than Porto and Bologna**. In the figure above these lines we show those alcohol consumption effects in which the prevalence of youngsters from Tarragona are significantly higher than those from Bologna and also from those from Porto, as for example, having unprotected sex (42,4% in Tarragona versus 32,6% in Bologna and 24,9% in Porto) or receiving a citation or being arrested in an alcohol check (18,4% versus 4,7% and 7,4%).

## Presence of the consequences depending on the alcohol consumption profile

Figure 4.4. Situations experienced as a result of drinking alcohol by intensity of alcohol consumption. Last 12 months. Often or always.



Finally, the figure 4.4. is useful to show the evident differences in the presence of the effects of alcohol consumption when the intensity with which it is consumed comes into play. For all the analyzed consequences, the group performing their last HED in two or less hours manifest higher prevalence than those who have done it in more than two hours. The figure shows those consequences where the differences are higher (>10 percentage points difference). Physically harming oneself or another person (20,2 points difference) is the effect that shows bigger difference, followed by damaging property or urban furniture (14,1%) and doing something that the respondent could not remember afterwards (13%).

### 3.7 Intervention

The subsection related to intervention is based only on qualitative data. Firstly, it exposes the information regarding the perceptions on actual interventions addressing alcohol consumption. Secondly, it shows some recommendations interviewed people suggest based on their experience.

#### Current situation and actual interventions

All people interviewed knew or had received specific training about alcohol consumption. However, youngsters affirm some of the information they know about alcohol consumption come from informal sources and not just from specific interventions. It should be noted that all the interventions they mention don't address HED, but alcohol consumption in general.

The majority of the interviewed youngsters from the three cities have received trainings addressing alcohol consumption during **High School**. Most of the interventions delivered inform about the risks and negative effects and consequences of drinking. There are different opinions about the appropriateness of these interventions that appear in all the cities. On the one hand, some people highlight the contents are useful to learn some protective strategies. Moreover, they state these interventions are carried out in a relevant moment because they are having their first experiences with alcohol use. On the contrary, the majority of them affirm the information is not reliable because it is based mainly on panic spreading and the message is essentially “do not drink”. There is a general agreement that interventions are concentrated mostly during this period, what reveals a general carelessness for the older ages (18-29). In addition, they state youngsters are starting alcohol consumption, so some of the information they receive relate to situations they have hardly ever experienced.

*«Maybe there are five that connect with you because it relates to their moment, but most of them haven't experience anything similar to what we are telling them! And when they are living it, we are not there to clarify or solve their doubts, and give them some tools because we have let them on their own.»*

Some participants from Bologna and Tarragona refer they have attended to **interventions in party settings** (discos, pubs, etc.). In this interventions, tips and advices related to protective and harm reduction strategies are provided, as well as informative flyers or free water. This kind of intervention is more common in Tarragona where they are carried out by peers. People from both cities highlight these interventions are very well taken by youngsters. Nonetheless, while when the information is given by a youth volunteer is remembered, it is not when it is given in a flyer.

*« They work for prevention about alcohol and drugs with flyers, condoms, food and water... they offer bottles of water. »*

Young people also mention their **families** as a relevant information source. Depending on the family, the advices are quite different, and so the reliability youngsters give to it. Some people comment they have been told not to drink, so the message coming from their parents is mainly prohibitive. By contrast, some others affirm parents give them some useful protective tips, so parents' advice is felt like a warning to take care.

Finally, despite young people bring up different interventions and sources of information aimed to inform them based on reliable information, some youngsters affirm learning happens mainly with **experience**. Any advice, data or information that is given to them, is not internalized until they live the experience that prove it. They argue reaction to alcohol varies widely from one to another person, so personal experience is the most valued information source. On the contrary, others maintain information obtained through peer or personal experience is not reliable because it is based on myth and legend.

## Recommendations

Participants suggest some recommendations to improve the interventions addressing alcohol consumption based on their experience.

The suggestion that appears the most is related to the target population of the prevention actions. Most of the interventions target youngsters under 18, but taking into account the previous assessments, they state **it would be relevant to offer prevention to young adults (aged 18 and over)**. Moreover, some interviewed people point out the content of the interventions should be better adapted to the age group of the target. For instance, they should include information related to the situations they have already experienced. In addition, some people mention it would be interesting to give information also to the parents of youngsters.

Secondly, most of the participants agree with the **counterproductive effects of prohibitive and panic spreading messages**. Moral or judgmental interventions that seek the exclusion of drinking experiences are criticized. They propose interventions that promote protective and harm reduction strategies, which they think are much more effective.

Regarding the content of the prevention actions, it has also been proposed to base the messages in real life experiences. Likewise, they also suggest including **information about immediate consequences related to social and relational consequences**, since youngsters are more concern about that

*« P6: I think the problem is to ban. When you forbid something is when you most want to do it.*

*P4: You feel like it!*

*P6: Then, it's not about not drinking, but drinking in moderation or ...*

*P2: sure! Learn to drink. Drink well (...)*

*P1: learn how to drink. If you know with 5 long drinks you're drunk, don't drink 5! Drink 3!»*

*« I never think about my liver when I will be forty years old, but I know alcohol has effects, I know that it's not healthy and so my liver could have problems. I take the bill, but I like drinking a glass of wine»*

problems that health ones. They argue it is difficult for them to project the future, so they don't take consider long-term consequences when drinking.

Nonetheless, other people defended that youngsters need to know better substances characteristics or the way distress influences problematic drinking patterns in order to facilitate they change risky behaviours.

In view of the good results of intervention in party settings and peer-to-peer experiences, they suggest promoting this kind of interventions and spread them to other contexts. That would help to reach those population who isn't receiving any intervention, such as young adults over 18 years old.

Finally, both professionals and youngsters point out structural characteristics of the leisure context should be taken into consideration. Multiple contextual variables are considered determining factors when it comes to understand why young people perform HED episodes. Variables such as non-alcoholic price in party settings, easy access to water, or advertising that link drinking alcohol with being cool influence people drinking patterns. Hence, they suggest implementing prevention actions intended to discotheque itself or discotheque staff.

## 5. Conclusions

---

### Consumption patterns

1. Among young people that consume alcohol, **51% drink frequently or even daily**. In other words, they drink 2 or more days a week. Nevertheless, there are relevant differences between cities. Porto is the place where it is less common, followed by Tarragona and Bologna, where consumption is a more spread.
2. **Women tend to drink fewer days a week than men:**
  - a. 53% of women drink occasionally in front of 42,5% of men.
  - b. 19% of men drink daily in front 10% of women.

**Alcohol consumption is concentrated in the weekend** (Friday and Saturday) in all the cities.

**Seasonality is factor that influences alcohol consumption.**

- a. Alcohol consumption is not evenly distributed during year because during the summer youngsters drink more frequently.
- b. During summer the places where alcohol consumption takes place change, since they don't need to stay in pubs or home because of the cold.

**Places where young people go out more frequently** to public places (56,1%), bars (55,1%), pubs/music bars (48%) and the own house or a friend's (42,4%), **regardless of the social position**. Nevertheless, money availability appears to determine where people goes and what they consume.

### Heavy Episodic Drinking

1. **HED prevalence in the last 12 months on the young alcohol drinking population is 73,8%**. However, it should be noted that the prevalence in Bologna is significantly higher than in Porto and Tarragona (82,6% versus 67% and 71,8%, respectively).
2. The most common HED **consumption pattern is drinking between 4 and 7 drinks in a range of 3 to 6 hours**. That is, up to 57,5% of the people who perform HED followed this pattern. The majority (75,1%) completed their last HED in more than 2 hours, while just 24,9% of them completed in two hours or less.

3. **Half of the young people that perform HED do it almost every weekend.** This data shows how extended and habitual this alcohol consumption behaviour is between young people that drinks alcohol.
4. **HED (in one occasion) is more prevalent among men than women** in Southern European cities (78,3% versus 69,2%).
5. **Age influences HED significantly**, there is a clear growing trend that reaches its peak between 22 and 25 years old and, after that, the trend is reversed.
6. **It isn't possible to establish a clear relationship between social position and HED** because data from different cities point in different directions:
  - a. In Porto, youngsters of mid-high social position conduct HED much more frequently than those of mid-low social position (73,2% vs. 63,2%).
  - b. In Tarragona, there is the opposite trend (65,4% vs. 77,4%).
  - c. In Bologna, HED is socially transversal phenomenon.
7. **The youngest they are, the faster they drink, so HED episodes are more intensive among the youngest people.** As they grow, people perform more HED episodes, but less intensive, until they are 25. At that age, HED episodes start decreasing.
8. The **areas where the HED occurs more commonly** are **pubs** (46,7%) and **bars** (43,4%). While in Porto most of the HED episode are concentrated in these places, in the other cities the rest of the places are also common.
  - a. In Porto, youngsters of mid-high social position conduct HED much more frequently than those of mid-low social position (73,2% vs. 63,2%).
  - b. In Tarragona, there is the opposite trend (65,4% vs. 77,4%).
9. The higher intensity of alcohol consumption (on the last HED), the higher prevalence of intake of other substances.

### **Risky and protective behaviours**

1. **Behaviours with prevalence of 50% or higher** (for the often or always category) **are mainly linked to serious harm reduction dimension**, namely, behaviours that contribute to reduce significant negative consequences arising from alcohol consumption. **No se encuentran entradas de índice.**

2. **Eating before drinking is a frequent protective strategy** as youngsters usually have dinner together before going out. this practice become more common among youngsters aged 24-29.
3. **Behaviours that are always or often conducted by less than 35% of people:** this group of behaviours are related to **limiting and stopping drinking dimensions**. Basically, it includes strategies linked to limiting drinking, such as alternating alcoholic and non alcoholic drinks, drinking water or putting extra ice on the drink. It also includes other strategies that aim to plan the night and when people will stop drinking, such as leaving the bar and stop drinking at a preset time.
4. **Women tend to carry out all the protective behaviours more often than men.** The average difference between women and men for each behaviour analysed is 11,4 points
5. **The oldest age group (24 to 29) perform more frequently the protective behaviours,** especially those related to the manner of drinking
6. **The population group that put into practice more protective behaviour is women aged 24-29 years old.** Consequently, differences between men and women are not reduced with age, but expanded.
7. Young people in **Bologna conduct protective behaviours** somewhat **less frequently**.
8. **Intensive HED group (in two hours or less) carries out less frequently all the protective behaviours**
9. Qualitative data seem to indicate it **is difficult to establish a common pattern in Southern European cities**. On the contrary, there are two opposite manners to manage alcohol consumption and its negative consequences. While in Tarragona there is a collective culture of drinking, in Porto, the drinking management is an individual issue.

### **Consequences and effects of drinking**

1. The most common consequences are associated with **physical discomfort and feelings of shame, rejection and conflict with others**.
2. The more prevalent consequence is **becoming sick or vomiting** which has been experienced one or more times by 66,5% of people in the last 12 months, in the second place, we find **doing something you cannot remember afterwards** (50,2%).

3. Some other consequences that have a high frequency are **being late to work or school (37,1%) being ashamed by your behaviour (40,2%), regretting losing control of the own senses (34,6%) or having unprotected sex (33,3%)**.
4. Tarragona points out that the main concern is not directly related to the physical sensations of discomfort, but to **how consequences affect their friends**. Several youngsters affirm they have usually have **feelings of regret for having argued with friends during the night**.
5. Differences by sex regarding to the alcohol consumption are important. **In 14 out of the 17 analysed alcohol consumption consequences, men are above women**.
6. The most reported types of aggression in Tarragona are **touching without consent or repeated insistence by boys**. Being sexually harassed, assaulted or abused has affected once or more than once in the last year to the 15,3% of women (for the all two cities aggregate data).
7. Differences by age are also important. **In 16 out of the 17 analysed alcohol consumption consequences, youngsters from 18 to 23 are above the ones from 24 to 29** (for once and more than once prevalence). Such as being late for work or school, doing something they don't remember afterwards, being ashamed by the own behaviour.
8. **Tarragona appears to have higher prevalence** in the majority of the alcohol effects than Porto and Bologna.
9. For all the analyzed consequences, **the group performing their last HED in two or less hours** (high-intensity HED) **manifest higher prevalence** than those who have done it in more than two hours.

## Bibliography

---

- Balsa, C., Vital, C., & Urbano, C. (2014). *III Inquérito Nacional ao Consumo de Substâncias Psicoativas na População Geral, Portugal 2012*. Lisboa: SICAD. Retrieved from: [http://www.sicad.pt/BK/EstatisticalInvestigacao/EstudosConcluidos/Lists/SICAD\\_ESTUDOS/Attachments/135/III\\_InqueritoNacionalConsumo\\_deSPnaPG%202012.pdf](http://www.sicad.pt/BK/EstatisticalInvestigacao/EstudosConcluidos/Lists/SICAD_ESTUDOS/Attachments/135/III_InqueritoNacionalConsumo_deSPnaPG%202012.pdf)
- Calafat, A., Blay, N. T., Hughes, K., Bellis, M., Juan, M., Duch, M., & Kokkevi, A. (2010). Nightlife young risk behaviours in Mediterranean versus other European cities: are stereotypes true?. *The European Journal of Public Health*, ckq141.
- Devaux, M. & Sassi, F. (2015), Alcohol consumption and harmful drinking: Trends and social disparities across OECD countries, OECD Health Working Papers No. 79, OECD Publishing, Paris.
- Executive Agency for Health and Consumers (CHAFEA). (2007). Standardizing Measurement of Alcohol Related Troubles (SMART).
- Gmel, G., Kuntsche, E., & Rehm, J. (2011). Risky single-occasion drinking: Bingeing is not bingeing. *Addiction*, 106(6), 1037–1045.
- Instituto Nacional de Estadística de Chile. (2011). *Estratificación Socioeconómica en Encuestas de Hogares. Documento de Trabajo*. Instituto Nacional de Estadística de Chile, Departamento de Estudios Sociales.
- ISTAT (2016). L'uso e l'abuso di alcol in Italia <https://www.istat.it/it/archivio/alcolismo>
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher*, 33(7), pp. 14-26. Retrieved from: <http://mintlinz.pbworks.com/w/file/attach/83256376/Johnson%20Mixed%20methods%20004.pdf>
- León-Muñoz, L.M., Galán, I., Valencia-Martín, J.L., López-García, E., Guallar-Castillón, P., Rodríguez-Artalejo, F. (2014). *Is a specific drinking pattern a consistent feature of the Mediterranean diet in Spain in the XXI century?* *Nutrition, Metabolism & Cardiovascular Diseases* 24(10), 1074-81
- Noct@ambulas. Observatorio cualitativo sobre la relación entre el consumo de drogas y los abusos sexuales en espacios de ocio nocturno. (2014/2015). *Informe*.
- Observatorio Español de la Droga y las Toxicomanías (OEDT), D. d. (2015). *Encuesta Domiciliaria sobre Alcohol y Drogas en España (EDADES)*. Madrid: Ministerio de

Sanidad, Política Social e Igualdad. Secretaría de estado de servicios sociales e igualdad. Delegación del Gobierno para el Plan Nacional sobre Drogas.

Observatorio Español de la Droga y las Toxicomanías (OEDT), D. d. (2015). *Encuesta sobre uso de drogas en enseñanzas secundarias (ESTUDES)*. Madrid: Ministerio de Sanidad, Política Social e Igualdad. Secretaría de estado de servicios sociales e igualdad.

Office for National Statistics. (2010). *Standard Occupational Classification 2010. Volume 3: The National Statistics Socio-economic Classification: (Rebased on the SOC2010) User Manual (Vol. 3)*.

Parada, M., Corral, M., Caamaño-Isorna, F., Mota, N., Crego, A., Rodríguez, S., & Cadaveira, F. (2011). *Definición del concepto de consumo intensivo de alcohol adolescente (binge drinking)*. *Addicciones*, 23(1).

Pearson, M. R. (2015). Questioning the validity of the 4+/5+ binge or heavy drinking criterion in college and clinical populations. *Addiction*.

Rolando, S., Beccaria, F., Tigerstedt, C., & Törrönen, J. (2012). First drink: What does it mean? The alcohol socialization process in different drinking cultures. *Drugs: education, prevention and policy*, 19(3), 201-212.

Soler-Vila, H., Galán, I., Valencia-Martín, J.L., León-Muñoz, L.M., Guallar-Castillón, P. & Rodríguez-Artalejo, F. (2014). *Binge Drinking in Spain, 2008-2010*. *Alcoholism: Clinical and Experimental Research*, 38, 810-819.

Vladar, E. K., Lee, Y., Stearns, T., & Axelrod, J. (2015). The Protective Behavioral Strategies Scale -20: Improved Content Validity of the Serious Harm Reduction Subscale. *Psychol Assess*, 27(1), 37-54.

World Health Organization (2014). *Global status report on alcohol and health 2014*. Geneva: World Health Organization. Retrieved from:  
[http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763_eng.pdf?ua=1)