

## Gender differences in patterns of alcohol drinking habits among teenagers and young adults, and possible approaches to public health

*Diferenças de gênero nos padrões de consumo de álcool entre adolescentes e adultos jovens e possíveis abordagens para a saúde pública*

Raquel Ferreira<sup>1</sup>

### Abstract

This study demonstrate patterns and differences of the alcohol drinking behaviour between genders, among teenagers and the young adults. In aim of this, literature review was performed in Portuguese and English languages, in indexed journals. The results found that drinking motives are culturally rooted and boys and girls may present different reasons according to age. Highest consumption of alcohol is among males; however, females are increasing alcohol intake. In general, boys that were extraverted and sensation-seeking start drinking for enhancement motives and girls with profile described as anxious start drinking for coping motives. But this pattern changes and from 23 years old to above age men drink more for coping reasons than women. For both genders, common reasons for alcohol use are self-affirmation, to look cool in front of colleagues, and mostly to deal with stress. Also for both, the consumption of alcohol often decreases after 30's; however at this age abusive use of alcohol with signs of intoxication already happened. In terms of prevention measures, it can be more effective that efforts are directed to vulnerable populations such as teenagers and young adults before harmful drinking. Also, to understand what are the motives that girls and boys are trying to cope with can help to develop policies that perhaps prevent alcohol harmful drinking through psychosocial prevention at specific levels: school, community activities or first work, for example. Loose rules for buying alcohol might incur with early drinking, therefore, tighter surveillance should be developed and implemented.

**Key words:** Alcohol. Gender differences. Public Health.

### Resumo

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<sup>1</sup> Chevening Alumni. Mestre em Saúde Pública pela Universidade de Glasgow. Pós-Graduada em Saúde da Família pela Universidade Estácio de Sá. M.D. Graduada pela 11a turma de Medicina da Universidade Católica de Brasília. E-mail da autora: [raquelferreirar@hotmail.com](mailto:raquelferreirar@hotmail.com)

Este estudo demonstra padrões e diferenças comportamentais no consumo de álcool entre gêneros dentre adolescentes e adultos jovens. Para tanto, foi realizada revisão de literatura em línguas portuguesa e inglesa, em revistas indexadas. Os resultados encontrados demonstram que os motivos para a ingestão de álcool são culturalmente guiados e garotos e garotas podem ter diferentes razões de acordo com a idade. Maior consumo de álcool está entre homens, no entanto, mulheres estão aumentando seu consumo. Em geral, garotos que são extrovertidos e em busca de sensações fortes começam a beber por motivos de auto valorização e garotas com perfil descrito como ansiosas começam a beber por motivos de enfrentamento de situações. Mas este padrão muda e, dos 23 anos acima, homens bebem mais por razões relacionadas ao enfrentamento de situações. Para ambos gêneros, razões comuns para uso de álcool são auto afirmação, para parecer legal em frente aos colegas, e principalmente para lidar com estresse. Também para ambos sexos, o consumo de álcool geralmente diminui após os 30; no entanto, nesta idade, o abuso de álcool com sinais de intoxicação já ocorreram. Em termos de medidas preventivas, pode ser mais efetivo se esforços forem direcionados a populações vulneráveis, como adolescentes e adultos jovens, antes do consumo danoso de álcool. Também, entender quais são as razões que garotas e garotos estão tentando lidar quando bebem pode ajudar no desenvolvimento de políticas que possam prevenir a ingestão danosa de álcool através de prevenção psicossocial em diferentes níveis: escola, atividades comunitárias ou primeiro emprego, por exemplo. Leis frouxas para a compra de álcool também podem contribuir para o início precoce do seu consumo, assim, medidas de vigilância mais rígidas poderiam ser desenvolvidas e implementadas.

**Descritores:** Álcool. Diferenças de gênero. Saúde pública.

## **Introduction**

### ***Why is it important to talk about alcohol consumption?***

Alcohol behaviour is being a subject of attention for reasons that come from physical to psychological and from individuals' to communitarian levels. The motivation for it, according to the World Health Organization<sup>(1)</sup> (WHO), is that there

is a need to prevent and reduce the harmful use of alcohol, and it should be a public health priority. A 'harmful use' of alcohol is defined by as 'drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large, as well as the patterns of drinking that are associated

with increased risk of adverse health outcomes<sup>(1)</sup>.

The Global Information System on Alcohol and Health (GISAH) is an important tool of the WHO for assessing and monitoring the health situation and trends related to alcohol consumption, alcohol-related harm, and policy responses in countries<sup>(1)</sup>. According to data from the GISAH, around 3.3 million people die annually because of the result of harmful use of alcohol<sup>(1)</sup>.

The 'recorded alcohol per capita (15+ years) consumption of pure alcohol' is one of the GISAH's indicators and its purpose is to monitor the magnitude, pattern and trends of alcohol consumption in the adult population<sup>(1,2)</sup>. Data has been recorded since 1990 and the worldwide per capita consumption has remained stable at around 4.3-4.7 litres of pure alcohol per year since then<sup>(1)</sup>. In 2010, the total consumption of alcohol in the world was equal to 6,2 litres of pure alcohol per person 15 years and older<sup>(1,3)</sup>. In Brazil, this data corresponds to 7,38 litres per capita, in the United States of America (USA) 8,55 litres, in China 5,75 and in the United Kingdom (UK) 10,26 litres of pure alcohol per capita<sup>(3)</sup>. The unrecorded consumption accounts for 25% of the globe total consumption<sup>(1)</sup>.

Particularly in the UK, after 1990's there was an increase of alcohol consumption, and it has more than doubled since 1950<sup>(4)</sup>. This may be a consequence of increased access, availability and affordability, as well as the alcohol acceptance culture of the 'mark of a mature society at comfort with itself', according to the Scottish Government<sup>(4)</sup>. Nevertheless, the rise of Scotland alcohol consumption has intensified alcohol misuse, factor that contribute to disparaging consequences<sup>(4)</sup>. Finally, according to the WHO<sup>(5)</sup>, there is no safe level for drinking alcohol; therefore, it is important to understand how and why people drink alcohol to be able to prevent this decision or even inform society about its risks before harmful drinking.

## **Methods**

The objective of the author of this article was to understand, describe and appraise about the patterns of alcohol drinking between genders male and female, by age, and finally draw conclusions that should be used at Public Health level. For this purpose, it was performed a research at the University of Glasgow's library website, where students can virtually get access to indexed journals such as 'Web of Science',

PubMed, SCOPUS, LILACS, SAGE, among others. It was used as key words: 'alcohol use', 'gender differences', 'patterns', and 'public health'. The research reached articles from 2005 to 2015, in English and Portuguese language. It was also searched at the World Health Organization website papers and consensus about alcohol behaviour use in association to gender differences. Papers were firstly selected by reading the title and the abstract, and finally by reading complete texts, being selected the ones considered relevant to the main proposed subject.

## **Results**

### ***Who drinks the most and why?***

Many studies are being performed to understand drinking habits and patterns between genders regarding alcohol use.

An epidemiological study published in 2007 in the USA utilized secondary data from the National Epidemiologic Survey on Alcohol and Related Conditions to evaluate drinking norms and rates based on age and gender<sup>(6)</sup>. The sample included 42.706 individuals, which 18.280 were females and 24.426 were males, with age from 18 to 65 years old<sup>(6)</sup>. This research found that the period of peak of consumption per occasion lies between 18 to 29 years old, with a small increase from

21 to 25 years old and linear decrease beginning at the age of 30 years old<sup>(6)</sup>. Men often report more drinks per occasion than women in every age cohort<sup>(6)</sup>. In another hand, it was found that majority of USA population drinks at moderate level or do not drink at all<sup>(6)</sup>.

This was an important research because the primary aim of the paper was to disseminate accurate and current information regarding drinking habits by sex and age that should be used by clinicians in helping patients to understand and compare their own drinking habits with other adults of similar age and gender<sup>(6)</sup>. On this way, it would be possible to use the developed tables in Motivational Enhancement Therapy, making patients to understand that, for example, the amount of alcohol that they drink was too much and just a few percentage of the population would drink on that harmful way<sup>(6)</sup>. Therefore, and according to the Asch Experiment<sup>(7)</sup> in 1955, it can be very useful, since opinions and social pressure can influence behaviour.

A study review of empirical research (published in 2006), investigated who drinks and what were the reasons for drinking<sup>(8)</sup>. This study was mainly based on young people from 10 to 25 years old and it was important because after analysis

of 82 studies, it turned into a picture on how teenagers start drinking and how they continue drinking in early adulthood<sup>(8)</sup>. It was found that drinking motives are culturally rooted and boys and girls will present different reasons according to age<sup>(8)</sup>.

In general, boys that were extraverted and sensation-seeking start drinking for enhancement motives and girls with profile described as “neurotic” and “anxious” start drinking for coping motives<sup>(8)</sup>. This pattern changes: from 13-15 years old, girls appear to drink more for coping motives than boys; from 18-19 years old, boys have more coping motives than girls; from this age up to 21, there was no difference in coping motives; and from 23 to above age men drink more for coping reasons than women<sup>(8)</sup>. Because reasons differ by gender at the start of the drinking habit, and since profiles at risk were identified, it was found that would have greater benefits with targeting prevention methods among the ones identified in risk than targeting general population<sup>(8)</sup>. Also, understand what are the motives that girls and boys are trying to cope with can help to develop policies that perhaps prevent harmful drinking through psychosocial prevention at specific levels: school, community activities or first work, for example.

Johnson, O'Malley, Bachman and Schulenberg (2008) found that there are not many disparities regarding the amount of alcohol consumed between girls and boys from 12 to 18 years old<sup>(9)</sup>. However, in 2002, Young *et al*<sup>(10)</sup> published that boys and girls starts diverging in rates of alcohol units at the age around 18. According to ‘Substance Abuse and Mental Health Services Administration’<sup>(11)</sup>, adult males turn into consume more alcohol and have more alcohol related problems than females. On this way, women might have protective factors that prevent them to abuse as much alcohol as men does in adulthood.

Brown *et. al* (2008) published that among young, gender differences concerning impact of perceptions about drinking on quantity of alcohol consumption may be negligible, also, the frequency of alcohol consumption is more dictated as a result of availability than cognition among the underage group<sup>(12)</sup>. Thinking about this perspective, money availability and loose rules for buying alcohol might incur with early drinking. Also, presence of alcohol at home and parents behaviour might consent premature drinking and send mixed messages that alcohol is well accept in society without important risks.

Poor parental monitoring was found linking emotional dysregulation in teens with a deviant peer network, which in turn, promotes substance use as a coping strategy<sup>(13)</sup>. Concerning social and cultural norms of double standard for acceptance, monitoring and punishment of deviancy between boys and girls, it was perceived in 1999 a protective factor against risk taking for female adolescents, where boys often have more freedom to interact with peers that teach and reinforce alcohol use<sup>(14)</sup>. It might be one of the reasons that alcohol harmful use is mainly associated with men than with women in adulthood.

Even though it was already well described that women commonly drink less alcohol than men<sup>(15-17)</sup>, other researches shows that this difference still remains, but women are drinking more in quantity and in frequency and the gap related to alcohol use and problems between sexes is decreasing<sup>(16,18)</sup>. It is concerning because women, in general, suffer more from consequences of alcohol misuse than men<sup>(19)</sup>, reason that put them in higher risk if they start drinking more in a harmful way.

Visser, Smith, Abraham and Wheeler (2012)<sup>(20)</sup> developed a qualitative study with the aim of understand the relation into young people and alcohol by examining

age and sex differences in their beliefs related to alcohol consumption and also regarding interventions to combat alcohol misuse. There were conducted 30 individual in-depth interviews and 6 group interviews to better understand how gender attributes and attitudes affect young men's and women's alcohol use and whether different health promotion interventions are required for men and women<sup>(20)</sup>.

The age of participants was from 13 to 25 years old<sup>(20)</sup>. They were divided in groups by age as follow: 13-15, 18-20 and 23-25 years old<sup>(20)</sup>. Conclusions were drawn according to those age groups and sex<sup>(20)</sup>. Reasons for drinking over all ages were very related with image and reputation and if someone decided not to drink, it would incur with social stigma<sup>(20)</sup>. Interesting is that, overall, few participants enjoyed the first drink, but they kept trying, so they would 'mature' their palate/ 'develop the taste', then they would enjoy it<sup>(20)</sup>.

Among younger ages, a motive for drinking was described as a 'marker of being mature' and 'being cool rather than boring'<sup>(20)</sup>. In addition, it was found that girls drink to look older, to impress and appeal to older boys<sup>(20)</sup>. On the other hand, boys drink to look mature and impress other boys and girls<sup>(20)</sup>. Girls with excessively concern regarding appearance

and reputation were the ones most likely to drink and reasons were to be popular, to be cool and go along with the crowd<sup>(20)</sup>. In general, youngsters that could handle more quantities of alcohol would perceive themselves more mature than others<sup>(20)</sup>.

Social networks (like 'Facebook') were associated with spreading this pattern of being cool. If someone post on Facebook about a bad hangover, it would get many 'likes'<sup>(20)</sup>. Therefore, a bad hangover would not cause concerns about physical health status, instead, would cause proud among all ages. On this way, it was perceived that if people do not change their way to think about alcohol, this harmful drinking habit will also not change<sup>(20)</sup>.

Among older age groups, reasons for drinking were less related with image and reputation<sup>(20)</sup>. Youngers would have more to prove than the ones among age 23-25<sup>(20)</sup>. On the other hand, there were expectations to drink in a gender way: among 23-25 years old, men should drink beer and women should drink wine and/or cocktails<sup>(20)</sup>. A girl with this age drinking alcohol pop could be devaluated by men<sup>(20)</sup>. Some more 'matures' said that they feel more comfortable drinking and they learn their limits, not being necessary continue binge drinking and, therefore, not feeling negative consequences<sup>(20)</sup>. It was an

interesting finding because it is correlated with the age of decreasing alcohol abuse, but would mean that they first had to experience a harmful drinking, and then learn their limits. It infers risk taken behaviour, and it should be prevented.

Nevertheless, why women behaviour related to alcohol is changing? Should women empowerment illustrate one of the reasons for increasing alcohol use? A review related to gender differences in factors influencing alcohol consume (2009) tells that: 'no matter how much risk is present, drinking is only possible when alcohol is made available'<sup>(21)</sup>, therefore, having money to buy drinks can be associated with the increase of intake. Drinking habits for women are connected with working hard, having professional lives, going out with friends and relaxing<sup>(22)</sup>. In addition, women that work in environments that are mostly dominated by men seems to be under higher risk to alcohol misuse<sup>(22)</sup>.

According to Zucker, Fitzgerald and Moses (1995)<sup>(23)</sup>, the decline in alcohol misuse observed by the middle of 20's is mainly impacted by the increase of responsibility due life transitions, such regular employment, marriage and parenthood<sup>(23)</sup>. For women, on this case, because they are delaying marriage and

parenthood, it can be other reason of drinking more in quantity and frequency. On the other hand, girls from the late adolescence to above age, suffer more from anxiety and depression than boys<sup>(24)</sup>; and poor mental health is associated with higher risk of alcohol misuse for both sex<sup>(25)</sup>, which shows another reason that women are drinking more.

Along life, data shows that there is a tendency of alcohol abuse and dependence to decrease, between both sexual categories<sup>(11)</sup>. This might happen because of responsibilities that increase, like exposed before, or even because survivor bias: harmful drinking people are under higher risk of violence, car accidents or diseases related to alcohol abuse<sup>(11,23)</sup>.

### ***Consequences of harmful drinking among males and females***

Alcohol abusive consume is a component of more than 200 disease and injury conditions described in the ICD-10, according to the WHO<sup>(1)</sup>. On this way, alcohol drinking resulted in 3.3 million deaths in 2012<sup>(1)</sup>, which is an important problem for public health. In 2012, 7,6% of deaths among males and 4,0% of deaths among females were resultant to alcohol<sup>(1)</sup>. Therefore, harmful drinking will cause consequences to both, women and men, but being part of a lower socioeconomic

status (SES) will infer higher mortality for alcohol-attributable causes<sup>(26,27)</sup>, despite lower socioeconomic groups often reporting lower levels of consumption<sup>(1,26)</sup>. In general, men experience lower alcohol reactivity than equivalent women (on age, weight, state of health) and thus, face increased risk for problematic drinking, because they require more alcohol in order to feel drunk<sup>(21)</sup>. Because women have a smaller volume of water than boys in which distribute ethanol, on one hand they are under a 'protective' factor, because they will feel drunk with fewer doses of alcohol than men<sup>(21)</sup>, therefore could possibly drink less, however they will be under higher susceptibility to violence and sexual assaults<sup>(20-21,28-30)</sup> because of the symptoms of drunkenness.

Long term drinking heavily was not associated with impact on fluid intelligence for either sex, however there was a significant negative association with a high crystallized intelligence score for women<sup>(31)</sup>. Crystallized intelligence is associated with cumulative knowledge; therefore, it was observed a cognitive decline<sup>(31)</sup>. Since it was a cross-sectional study, harmful drinking can not be considered as causation of this loss of cognition, but considered to be an



important subject for further longitudinal studies.

Other examples of health outcomes associated with excessive use of alcohol are neuropsychiatric (conditions such as depression, anxiety, epilepsy, alcohol dependence); brain damage and foetal alcohol syndrome; gastrointestinal disease (such as liver cirrhosis, pancreatitis); many types of cancer (inclusive breast cancer); intentional injuries (like suicide and violence); traffic accidents; and cardiovascular diseases independent of amount of alcohol intake (hypertension, atrial fibrillation and haemorrhagic stroke)<sup>(1)</sup>.

Social consequences are seen at many levels. Family, work and community are affected when there is alcohol related abuse, violence and inadequacy of behaviour<sup>(1)</sup>. In other level, women social position is being diminished in value because of their increasing habit of drinking<sup>(1,22,30)</sup>. It must be discussed because women is being empowered and should have the freedom of drinking without being looked down, but they also should have the knowledge about the harms that this 'new' habit can cause in their lives.

Therefore, because of consequences and clearly different modes that alcohol

harmful drink affect different genders, public health interventions must consider those and start developing policies that also consider differences between men and women.

### **Discussion**

Alcohol can be seen as a contributing factor for almost 50% of the indicators within the Public Health Outcomes Framework for England. As such addressing alcohol-related harm could be a key route to improving public health and reducing general health inequalities'.<sup>(26)</sup>

According to the WHO, 'up until 2025, alcohol per capita consumption (15+ years) is expected to continue to increase in half of the WHO regions unless effective policy responses reverse this trend'<sup>(1)</sup>. Therefore, it is important to deal with this subject with the same position that Tabaco is being deal, considering that its harmful use causes damage in the entire society.

In view of the pattern of alcohol use, there is no considerable gender difference in quantity of alcohol consumption between sex, among teenagers. On the other hand, reasons for start drinking are mainly related to the feeling of achieving maturity and therefore stimulate youngsters to seek for this behaviour. Among girls, anxiety is associated with risk to start drinking and the motive would be to 'cope' with life

situations. Among boys, the ones sensation-seeking are under higher risk for alcohol abuse. Thus, it is important to approach principally these teens under higher risk with the aim of preventing harmful drinking.

Even though teenagers do not appreciate the first drink, they continue trying to adapt their palate to the taste because they want to look 'cool', 'mature' and 'part of the group'. They also don't want to be perceived as weird in case of they don't drink. For this reason, public health action should forbid advertisements that associate drinking alcohol with high status at the same level that Tabaco advertisement were forbidden, since youngers are at a vulnerable age and are highly influenced by advertisements and group behaviour.

Availability of alcohol is one of the points raised that make youngers to drink. Restrictive regulations should be implemented in aim to don't allow under age buy alcohol products and punish those who still sell. In addition, public health measures to advice parents about mixed information related with acceptance of alcohol and the limits of use. Hangover episodes should be prevented with explanations about harms and possible risks for boys and girls.

Among older age (23-25), alcohol difference in use increase, and men often drink more than women. For this reason, it is interesting to consider what are the 'protective factors' that make girls do not drink as much as boys. Lower social acceptance for girls that binge drink, higher parenting regulation for girls, risk for suffer violence and social assault, and higher acceptance for women not to drink as much as men are associated with prevention of alcohol misuse. These factors, therefore, should be used to implement public health measures for males also.

Pattern of drinking habits is changing and women are starting to drink more in quantity and frequency. This might be associated with women empowerment, therefore, feminist organisations should be called to talk about alcohol use, in terms that women are physically more fragile than men for alcohol drinking, are under higher risk for acute and chronic intoxication, violence and sexual assaults and alcohol can cause harm for foetal at first stages of pregnancy.

Lastly, one size do not fit all. Therefore, Public Health interventions must adapt to sexual differences in drinking habits and, thus, be able to stop the tendency of women acquire the habit of harmful

drinking and to protect both sexes at the levels of subjectivity that the differences require.

### **Conclusion**

There are many factors that will contribute to men and women to start and continue using alcohol. Mainly reasons are related to mental health, coping motives, and social acceptance within a specific group. Gender differences in reasons for drinking alcohol will appear within group ages, but will not be extremely different between male and female. In reason that abusive use of alcohol can cause several harms to the user, family and society, public health actions should be built in aim to tackle excess of social acceptance and to inform the vulnerable ages, mainly teenagers and young adults, about risks that alcohol drinking can cause, which would be a preventive measure that should involve different organizations. On the other hand, there is lack of information about public health actions among these specific groups, which could be a subject of attention to further studies. Possibly preventions measures would be more effective among the group under 30's since bad alcohol behaviour drinking often happens before this age.

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