

Consumption of alcohol and binge drinking among school-age young individuals

Consumo de bebidas alcoólicas e *binge drinking* nos jovens em formação
Consumo de bebidas alcohólicas y *binge drinking* en jóvenes estudiantes

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Descritores

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Abstract

Objectives: This objective of this study is to understand the consumption of alcohol, in particular the practice of binge drinking (BD), among young people attending compulsory education in the district of Lisbon, Portugal.

Methods: This was a descriptive correlational study of quantitative nature. The sample consisted of 174 male and female participants attending compulsory education in the district of Lisbon, Portugal. The following assessment instruments were used: a sociodemographic questionnaire and the Alcohol Use Disorders Identification Test (AUDIT-C). Data were analyzed using SPSS 25.

Results: The sample included participants with a mean age of 15 years old, 75.9% of which had already consumed alcohol, and 23% had already practiced BD; a higher percentage of BD was seen among female participants. Statistically significant differences correlating practice of BD, hazardous drinking as per the AUDIT-C, and type of education attended were seen. Participants of either sex showed the same percentage of hazardous drinking. A positive correlation between age of onset, hazardous drinking, and BD was seen.

Conclusion: Early-onset alcohol consumption and BD among school-age young people evidences a pressing need for alcohol consumption prevention actions in Basic Education and increased alcohol consumption literacy among young people, in particular regarding BD.

Resumo

Objetivo: Este estudo, tem o objetivo de conhecer o consumo de bebidas alcoólicas e em particular a prática de *binge drinking* (BD) em jovens que frequentam a escolaridade obrigatória, no distrito de Lisboa, Portugal.

Métodos: Estudo descritivo e correlacional de natureza quantitativa. Amostra constituída por 174 indivíduos de ambos os sexos que frequentam a escolaridade obrigatória em escolas do distrito de Lisboa, Portugal. Foram utilizados como instrumentos de avaliação: questionário sociodemográfico e *Alcohol Use Disorders Identification Test* (AUDIT-C). Análise dos dados pelo SPSS 25.

Resultados: Amostra com uma média de idades 15 anos, em que 75,9% da amostra já consumiu bebidas alcoólicas e 23% da amostra já praticou BD, destacando-se uma maior percentagem no sexo feminino. Existem diferenças estatisticamente significativas entre a prática de BD, o consumo de risco identificado pelo AUDIT-C e o tipo de ensino frequentado. Participantes de ambos os sexos apresentavam percentagens idênticas de consumo de risco de bebidas alcoólicas. Há correlação positiva entre a idade de experimentação, o consumo de risco e a prática de BD.

Conclusão: O consumo de bebidas alcoólicas nos jovens em formação, em idades muito precoces, assim como a *de BD*, mostram a pertinência de iniciar ações de prevenção do consumo de álcool ainda no ensino básico e a necessidade de aumentar a literacia dos jovens sobre o consumo de álcool, em especial no BD.

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Conflicts of interest: None to report.

Resumen

Objetivo: Este estudio tiene el objetivo de conocer el consumo de bebidas alcohólicas, en particular la práctica de *binge drinking* (BD) en jóvenes que asisten a la escuela obligatoria en el distrito de Lisboa, Portugal.

Métodos: Estudio descriptivo, correlacional y de naturaleza cuantitativa. Muestra constituida por 174 individuos de ambos sexos que asisten a la escuela obligatoria en instituciones del distrito de Lisboa, Portugal. Los instrumentos de evaluación utilizados fueron: cuestionario sociodemográfico y *Alcohol Use Disorders Identification Test* (AUDIT-C). Análisis de datos mediante SPSS 25.

Resultados: Muestra con un promedio de edad de 15 años, de los que el 75,9 % ya consumió bebidas alcohólicas y el 23 % ya practicó BD, con un mayor porcentaje entre el sexo femenino. Existen diferencias estadísticamente significativas entre la práctica de BD, el consumo de riesgo identificado por el AUDIT-C y el nivel de enseñanza en el que se encuentran. Participantes de ambos sexos presentaron porcentajes idénticos de consumo de riesgo de bebidas alcohólicas. Hay una correlación positiva entre la edad que probaron por primera vez, el consumo de riesgo y la práctica de BD.

Conclusión: El consumo de bebidas alcohólicas de jóvenes estudiantes, a una edad muy precoz, así como la práctica de BD, demuestran la relevancia de iniciar acciones de prevención sobre el consumo de alcohol en la escuela primaria y la necesidad de aumentar la instrucción de los jóvenes sobre el consumo de alcohol, en especial el BD.

Introduction

Alcohol consumption is estimated to affect about 2.3 billion individuals over the age of 15 years globally. Studies conducted in national territory show that prevalence of alcohol consumption has decreased due to positive indicators, such as delaying age of drinking onset in young populations, decreasing per capita consumption, and achieving significant health gains on mortality and morbidity. However, worrying percentages of binge drinking (BD), hazardous drinking, and dependence in the 15-to-34-year age group are still seen.⁽¹⁻³⁾

Globally, the prevalence of BD peaks at 20 to 24 years of age, except in the Eastern Mediterranean, where prevalence rates for BD among 15-to-24-year-old drinkers are higher than in the overall population.⁽¹⁾

According to Portugal's 2016/17 National Survey on Drug Use in General Population (INPG), binge drinking is practiced by 11.8% of the population in the 15-to-24-year age group. When comparing 2012 and 2017 INPG data, a 5.75 percent point decrease is seen in the 15-to-24-year age group for the practice of BD. This kind of drinking is mainly seen in the male sex, despite a minor percent difference between the sexes.⁽³⁾

A study on alcohol, tobacco and drug use (ECTAD) further surveying different addiction and dependence behaviors was conducted in 2015 with a population of students between the ages of 13 and 18 years. It showed that life-long drinking increases proportionally with age, and that 91% of 18-year-

olds had already tried alcohol; difference between sexes is 0.6% higher for the male sex.⁽³⁾ According to the study, BD also increases with age, and at 18 years old 36.2% of the population reported having binge drunk in the last 30 days; reports are higher among the male sex with a 12-percent-point difference when compared to the female sex. When comparing BD data from the 2011 and 2015 ECTAD studies, an increase in BD is seen at the ages of 17 and 18 years, which contradicts the trend for younger students. BD increase at the age of 18 is also confirmed by National Defense Day data showing an increase in BD from 2015 to 2017 in a 12-month time period preceding the survey. These data showed that 49.5% of young people had practiced binge drinking in the previous 12 months. According to nation-wide data, BD increased with age and was reported by nearly half this age group in a 12-month time period preceding the survey.⁽³⁾

In the last few decades, a considerable change can be seen in the pattern of alcohol consumption. The daily consumption of alcohol, essentially among the male sex in frequently elevated quantities and sometimes leading to acute intoxication as a social facilitator and/or integral part of one's diet (Mediterranean trend of consumption) has become almost weekend-exclusive and often associated with the intent of rapidly achieving acute intoxication (binge drinking) at an increasingly early age and more prevalent among the female sex (mostly Anglo-Saxon consumption).⁽⁴⁾

Alcohol use is characterized by the quantity, time period, and related consequences of alco-

hol consumption, thus the need to differentiate the typical alcohol dependence pattern from a behavior of excessive drinking on a single occasion followed by periods of abstinence. The highest-level consensus reached was on the definition of number of standard drinks and period of time (number of hours and frequency) for the consumption of alcohol.⁽⁵⁾ BD is usually defined as the abusive consumption of five or more alcoholic beverages in men and four in women over a period of two hours. Most authors agree that an adequate time period for overall assessment varies from 6 months to 1 year, once binge behavior is partially associated with social events, such as academic parties, thus the longer period for alcohol consumption patterns to be adequately characterized.^(6,7)

This kind of consumption constitutes a significant public health issue due to complications caused by associated behaviors of social maladjustment, such as driving under the influence of alcohol, hazardous sexual behavior, or interpersonal violence, and it may lead to learning disabilities, school failure, and increased dropout rates in labor or education settings.⁽⁸⁻¹⁰⁾

In Portugal, age of drinking onset and the first episodes of BD correlate to an age group where young people are mainly in school. According to Portuguese law, school attendance is mandatory for children and teenagers between 6 and 18 years old. After finishing the 9th year of school, usually at an age of 15 years, Portuguese young people will have several options to continue their education. These options range from regular education to vocational schools, the latter being destined to those pursuing the labor market. This corresponds to 33.1% of the student population attending compulsory education.^(11,12)

Despite several studies reporting a marked increment in the consumption of alcohol associated with simultaneously joining Higher Education, the age of drinking onset and first BD-like consumption experiences takes place during compulsory education. The objective of this study is to understand the consumption of alcohol, in particular the prac-

tice of BD, in young individuals attending compulsory education schools in the district of Lisbon, Portugal.^(3,13,15)

Methods

This was a descriptive correlational study of quantitative nature. Participants were selected in regular and vocational Secondary Education settings by convenience sampling. The sample consisted of 174 male and female participants between 13 and 22 years of age attending three different schools in the district of Lisbon. An authorization request was placed with school principals. After participants were explained their individual right to refuse participation at any time without suffering any consequences and were assured confidentiality of collected data, as well as respondent anonymity, each participant, parent, and/or guardian signed an Informed Consent Form before questionnaires were handed and filled out. Authorization from Atlântica's School of Health Sciences' Ethics Committee was obtained for the execution of the study, and all Declaration of Helsinki's and Oviedo Convention's ethical recommendations were duly followed and warranted.

The following data collection instruments were used: a sociodemographic questionnaire including the questions "What age were you when you first tried alcohol?" and "Have you ever tried alcohol?" and the Alcohol Use Disorders Identification Test-Concise (AUDIT-C).^(15,16)

The Alcohol Use Disorders Identification Test-Concise (AUDIT-C) consists of AUDIT's (which are used world-wide and have been validated for the Portuguese language⁽¹⁷⁾) first three screening questions and ten additional questions on harmful consumption of alcohol, dependence symptoms, and harmful consequences of alcohol abuse. The AUDIT-C score varies from 0 to 12 points, considering positive screening. The following cutoff points are recommended to classify an unlikely probability of excessive alcohol

consumption: men with a score < 5 points and women with a score < 4 points.⁽¹⁸⁾

Binge drinking was assessed by question 3: “How often do you have six or more drinks on one occasion?” Answers may range from: 0 (Never), 1 (Less than monthly), 2 (Monthly), 3 (Weekly), and 4 (Daily or almost daily).⁽¹⁸⁾

The t-test was used to compare independent samples for sex and type of education. In order to test the correlation between age of onset, hazardous drinking, and practice of BD, Pearson’s correlation coefficient (r) was used. The Statistical Package for the Social Sciences (SPSS), version 25.0, was used for data analysis. All tests adopted a 5% significance level(p<0.05).

Results

The sample consisted of 174 participants, where 44.3% were male and 55.7% were female. Mean age in male participants was 15.2 (±2.3) years old and mean age in female participants was 15.3 (±1,5) years old. Regarding type of education, 75.3% at-

tended regular education and 24.7% attended vocational education. Regarding alcohol consumption, 75.9% of the sample had already tried alcohol and only 24.1% had never tried alcohol. Age of onset varied from 5 to 19 years old; the most frequently reported age of onset was 14 years old. An analysis of data on alcohol consumption in the last year of school show that 55.17% of participants had consumed alcohol (Figure 1).

Regarding participants showing an unlikely probability of excessive alcohol consumption, results showed that these corresponded to 90.2% of the sample. Binge drinking was reported by 23% participants, and 5.7% incurred in this pattern of consumption at least monthly. Upon analyzing differences between sexes regarding the presence of hazardous drinking, no statistically significant differences were found (t (14) =-0.60; p=0.55). Female participants (M=1.52; ±0.67) when compared to male participants (M=1.33; ±0.76) are the ones to most frequently practice BD; however, this difference between sexes showed no statistical significance (t (37) = -0.82; p=0.41). When assessing differences between types of education, statistical-

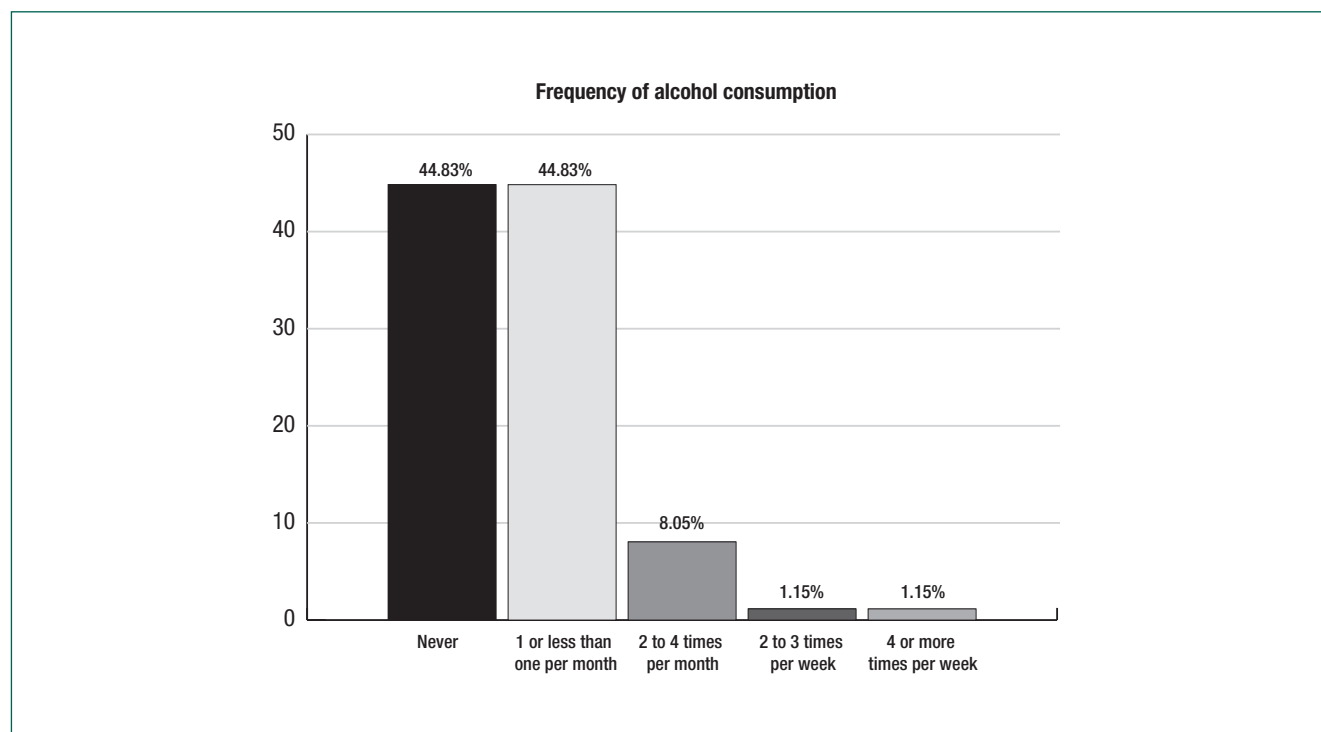


Figure 1. Frequency of alcohol consumption in the last 12 months

ly significant differences were seen ($t(171) = -3.47$; $p = 0.00$) for age of onset, with an earlier age of onset in regular education students ($M = 9.19 \pm 5.9$) when compared to those attending vocational education ($M = 12.7 \pm 5.6$). Hazardous drinking also showed statistical significance ($t(15) = -2.15$; $p = 0.05$), and vocational students showed the highest AUDIT-C scores ($M = 6.42 \pm 2.07$) when compared to regular education students ($M = 4.70 \pm 1.25$). Participants with an early age of onset showed the most frequent practice of BD ($r = 0.25$; $p = 0.001$). An earlier age of onset for drinking also showed positive correlation to a higher AUDIT-C score ($r = 0.43$; $p = 0.0001$).

Discussion

In this study's sample, the pattern of life-long drinking (75.9%) among median age participants is between 31% and 91% the pattern reported by other nation-wide Portuguese studies. However, alcohol consumption in the last year of school (55.17%) and delayed age of onset (mode = 14 years old) were higher than in data reported by other nation-wide Portuguese studies, which reported age of onset at 13 years old.^(2,14,19)

The sample's BD percentage (23%) among 15-year-olds is higher than in 2011 (15.4%) and 2015 (14.2%) data reported by other studies.⁽³⁾ This seems to contradict the 2012 stabilization trend for drinking among young people.⁽¹⁾

Participants showing unlikely probability of excessive alcohol consumption make up 90.2% of the sample, a percentage higher than in data reported by other Portuguese studies.^(2,19) Among them are participants who have never tried alcohol (44,83%) and those who consume alcohol but have not shown any health risks yet. It is important to point out that out of the 55.17% participants who consumed alcohol within the last year, 23% incurred in BD. However, given the number of times these BD episodes took place in the past 12 months, according to AUDIT-C, it cannot be considered hazardous consumption.

The percent difference between participants showing hazardous drinking (9,8%) and those practicing BD (23%) seems to suggest young people are illiterate of the consequences drinking, regardless of the type of alcohol consumption.^(20,21)

Type of education seems to correlate to how young people start consuming alcohol as a habit. Despite an earlier age of onset in regular education students when compared to vocation education ones, an analysis of hazardous drinking shows that it is higher among vocational education students. Certainly, the idea of joining the labor market and the burden that goes with it, as well as taking on characteristic roles of an adult phase (such as professional accountability and self-management of personal finance), may be related to this kind of drinking.

Results showed that age of onset shows positive statistically significant correlation to BD ($r = 0.25$; $p = 0.001$) and a higher AUDIT-C score ($r = 0.43$; $p = 0.0001$). These data seem to suggest that measures to delay age of drinking onset must be associated with other to prevent alcohol consumption from becoming a social habit among young people; despite a delayed age of onset, drinking — be it in the form of BD or likely hazardous drinking — was still seen.⁽²²⁾

Conclusion

Alcohol consumption seen in this study's sample confirms the delayed age of onset and hazardous drinking percentage trends seen since 2012, despite this study's BD percentage being higher than in data from other nation-wide studies including the same age group. Early-onset alcohol consumption and BD among school-age young people evidences a pressing need for alcohol consumption prevention actions in Basic Education. It also shows a need for increased alcohol consumption literacy among young people, in particular regarding BD. This study shows that alcohol consumption among school-age youngsters is influenced by different variables, among which

are the type of school attended. Given the needs shown by this study, in order for the proper prevention strategies to be planned and implemented, it is paramount to understand the factors influencing drinking. Alcohol consumption begins during adolescents' educational/academic years — and in some cases, it becomes a habit. This stage of life is filled with significant persons, such as teachers or sports' coaches and recreational community leaders, who must be made aware of the signs of substance abuse and its consequences in order show these young people a different path. Thus, the authors deem fitting that formative actions be conducted targeting those in direct or indirect contact with young people to identify hazardous drinking as early as possible. It is essential that healthcare providers, namely nurses, research alcohol consumption systematically and judgement-free to intervene in an individualized way and decrease the stigma of alcohol consumption.

Collaborations

Valentim OMMS, Moutinho LSM, and Carvalho JCM contributed to the design of the project, analysis and interpretation of data, drafting the manuscript, provided critical review relevant to intellectual content, and approval of the final version to be published.

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