

# Alcohol Hangover Syndrome in Portuguese University Students: Prevalence and Management

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## 1 Introduction

**Alcohol Hangover Syndrome (AHS)** is characterized by a variety of physical and psychological symptoms, such as headache, nausea, fatigue, and dehydration, which occur after excessive alcohol consumption. Despite its **high prevalence**, particularly among young adults, AHS remains an **underexplored** phenomenon, with no validated treatments available. Common strategies to mitigate symptoms include the use of nonsteroidal anti-inflammatory drugs, paracetamol, and vitamin or mineral supplements.

## 2 AIMS

This study aimed to **evaluate the prevalence and patterns of AHS**, as well as the **pharmacological practices** adopted for symptom relief, among **university students in Portugal**.

## 3 Materials and Methods

**Study period:** December 24 – January 25

**Target population:** N total= **563**, aged 18 or older, enrolled in higher education and living in Portugal.

**First stage:** Development of a questionnaire using Google Forms, confidential and anonymous

- Sociodemographic characterization
- Characterization of alcohol consumption
- Characterization of hangover frequency
- Hangover symptomatology
- Pharmacological therapy

**Second stage:**

- Study approved by the Egas Moniz Ethics Committee (PT-223/24).
- All participants provided informed consent

**Third stage:**

- Dissemination of the questionnaire through social media.



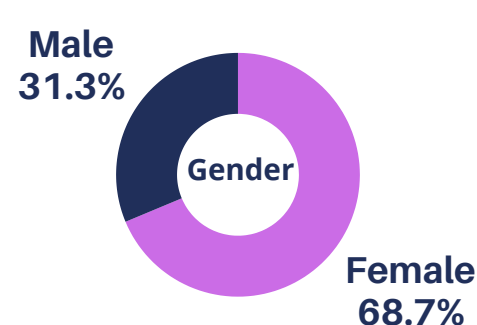
**Fourth stage:**

- Statistical analyses were conducted using IBM SPSS Statistics 29 (Pearson's chi-square test and the Mann-Whitney test)



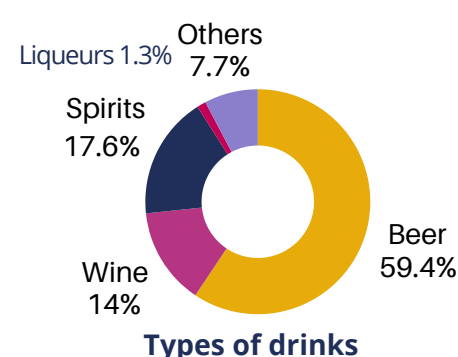
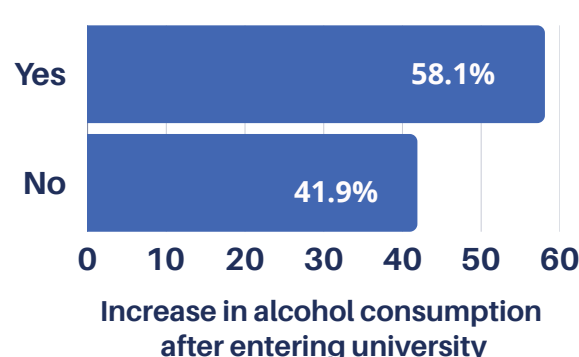
## 4 Results

### 1. Sociodemographic characterization

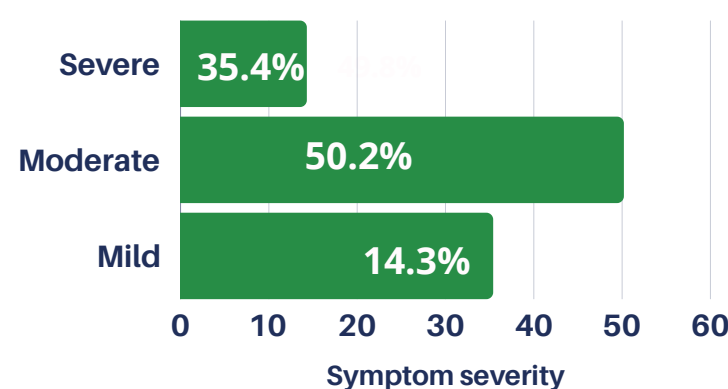
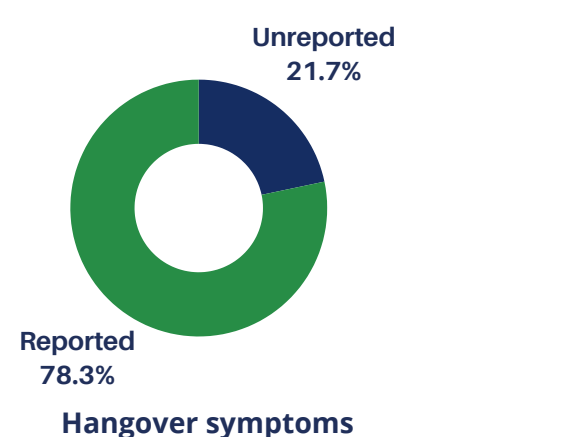


### 2. Alcohol Consumption Patterns

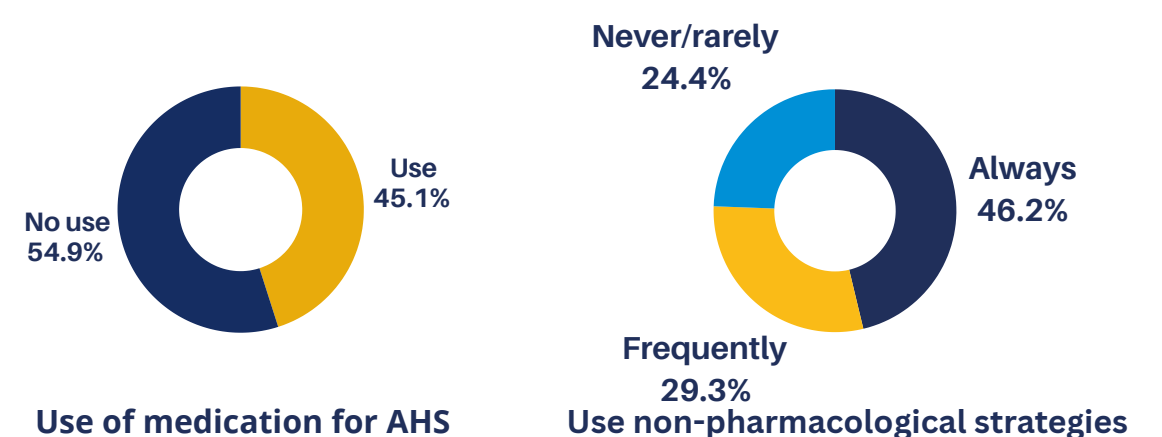
Total abstinence	3.4%
Consumption > once per week	26.7%
Typically consume 3-4 drinks per occasion	36.8%



### 3. Hangover Symptoms



### 4. Strategies to Manage Hangovers



- 79.6% of students stated that would not change alcohol intake even with AHS treatment available

### 5. Statistical Results

Pearson's chi-square test ( $\alpha=0.05$ ) demonstrated significant association ( $p\text{-value} < 0.05$ ) between:

- AHS severity and its frequency
- AHS frequency and use of medication
- AHS severity and use of medication

The **Mann-Whitney U test** results revealed significant sex-related differences in both hangover frequency ( $p < 0.05$ ) and alcohol consumption frequency ( $p < 0.001$ ).

## 5 Conclusions

- **High prevalence of alcohol consumption** among Portuguese university students, particularly beer.
- Alcohol intake **increased after entering higher education**
- Most students **did not use pharmacological measures** for hangover relief.
- Availability of AHS treatment would not change students' drinking behavior.
- This study stresses that **tailored strategies are essential to reduce university students' alcohol consumption**.



References

