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CONSUMO DE ÁLCOOL NOS ESTUDANTES UNIVERSITÁRIOS — RELAÇÃO COM A AUTOESTIMA E A BUSCA DE SENSAÇÕES

ALCOHOL CONSUMPTION IN UNIVERSITY STUDENTS – RELATION WITH SELF-ESTEEM AND SENSATION-SEEKING

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RESUMO

O álcool é a substância mais consumida em Portugal, apresentando diversas consequências diretas e indiretas para a saúde. Assim, o consumo de álcool nos estudantes universitários constitui uma área de investigação e intervenção com grande interesse científico. O presente estudo procurou compreender a relação existente entre o consumo de álcool e as variáveis autoestima e busca de sensações, e também apresentava o intuito de compreender quais seriam as possíveis diferenças consoante o género. Através da utilização de um protocolo que engloba as escalas de *Alcohol Use Disorders Identification Test* (AUDIT), *Rosenberg Self-Esteem Scale* (RSES) e *Brief Sensation Seeking Scale V* (BSSS-V), obteve-se uma amostra de 553 estudantes de diversas universidades portuguesas.

Concluiu-se que os estudantes universitários portugueses apresentam um risco baixo de consumo de álcool, apresentando os homens um maior risco de consumo de álcool quando comparados com as mulheres. No que concerne à autoestima não foi encontrada qualquer relação com o risco de consumo de álcool. Em contraste, encontrou-se uma correlação positiva entre o risco de consumo de álcool e a busca de sensações, o que poderá significar que uma maior busca de sensações pode estar relacionada com um maior risco de consumo de álcool.

Palavras-chave: Álcool; Autoestima; Busca de Sensações; Género; Estudantes Universitários; Psicologia.

ABSTRACT

Alcohol is the most consumed substance in Portugal, leading to several direct and indirect consequences for health. Thus, alcohol consumption within university students is an area of investigation and intervention with great scientific interest. This study aimed to comprehend the relation between alcohol consumption and the variables self-esteem and sensation seeking, as well as to understand the possible differences according to gender. Through the administration of a more general protocol that includes the Alcohol Use Disorders Identification Test (AUDIT), Rosenberg Self-Esteem Scale (RSES) e Brief Sensation Seeking Scale V (BSSS-V), a sample of 553 students from several Portuguese universities was obtained.

Results of this investigation show that Portuguese university students have a low risk of alcohol consumption, with men presenting a higher risk of alcohol consumption when compared to women. Regarding self-esteem, no relationship was found with the risk of alcohol consumption. In contrast, a positive correlation was found between the risk of alcohol consumption and sensation seeking, which possibly means that greater sensation seeking may be related to a greater risk of alcohol consumption.

Keywords: Alcohol; Self-esteem; Sensation Seeking; Gender; University Students; Psychology.

INTRODUCTION

1- Patterns of alcohol consumption among university students

Alcohol is the most consumed substance in Portugal with an increase prevalence of alcohol consumption throughout life, increasing from 72% in 2012 to 83% in 2016 among young people between 15 and 34 years old. This prevalence continues to be higher in the male group, with 87% in 2016, more than in the female group that had a prevalence of 79% in 2016 (SICAD, 2019).

Specifically in the population between 15 and 24 years old, it is evident the frequency of consumption of any drink at least once a week (33%). Even so, in 2014, 59% of Portuguese young people considered regular alcohol consumption as high risk and 36% as medium health risk, while regarding occasional consumption, 5% considered it as high risk and 72% as medium health risk. These data show that young Portuguese have a higher perception of risk than young Europeans (SICAD, 2019).

Alcohol consumption can represent several health consequences, in a directly or indirectly way. In the specific case of university students, alcohol consumption can have consequences in several areas, such as lower academic performance, health problems, a greater tendency to get involved in legal problems and adopt other risk behaviors, as well as to consume and develop addiction to psychoactive substances in adulthood (Esmaeelzadeh et al., 2018; Skidmore et al., 2016). Therefore, alcohol consumption may not present significant immediate consequences, but it is associated with several negative problems at the individual and social level (World Health Organization, 2007). Even so, alcohol consumption is a common practice in social events, and socialization is presented as one of the main motivators for this consumption (Kairouz et al., 2002).

2- Self-esteem

Self-esteem is important in all aspects of life, and it can be considered a basic human need, making it essential for a healthy self-development (Branden, 2001). Rosenberg (1965) views this construct as an attitude, defining it as the interpretation that an individual makes about their value, as well as the beliefs and perceptions of themselves in a favorable or unfavorable way (Baumeister et al., 2003).

Self-esteem and alcohol consumption

Investigations that seek to study the relation between self-esteem and alcohol consumption show inconsistent results despite the evidence of a relationship between self--esteem and substance use, therefore it is not possible to define the role of self-esteem in consumption. Thus, some studies point to a link between low self-esteem and alcohol consumption (Collison et al., 2016; DeHart et al., 2009; Maldonado et al., 2008; Roemer & Walsh, 2014; Szinay et al., 2019), while others found a relation between consumption and greater self-esteem (Muñoz-Paríz & Ruíz-Muñoz, 2008; Neumann et al., 2009).

Self-esteem may be related to the individual's ability to resist to social pressures to consume substances (Maldonado et al., 2008). In addition, some studies also point to this construct as an important individual factor for alcohol consumption, while low self-esteem can be a predictor of consuming greater amounts of alcohol (Glindemann et al., 1999). In the study of Collison et al. (2016), self-esteem was negatively correlated with attitudes towards alcohol, whereby individuals with lower self-esteem had less restrictive attitudes towards alcohol, as in contrast, individuals with higher self-esteem were more restrictive regarding its consumption.

On the other hand, other studies suggest a correlation between self-esteem and higher consumption of alcohol and illicit substances (Muñoz-Paríz & Ruíz-Muñoz, 2008; Neumann et al., 2009). In the investigation by Muñoz-Paríz and Ruiz-Muñoz (2008) it can be observed that consumption was

higher in the group with a high-medium self-esteem rather than the low-medium self-esteem group, which was evident for the number of drinks and frequency of alcohol consumption per week and by the consumption of other substances. These results can be explained by the tendency of these subjects to place themselves more regularly in social situations where alcohol consumption is seen in a positive way. Additionally, these subjects can also consume with the objective of obtaining positive experiences or interpersonal interactions (Cooper et al., 1995; DeHart et al., 2009).

3- Sensation seeking

Sensation seeking can be used to understand, predict, and explain various behaviors as well as social interactions (Gouveia et al., 2010, cit in Sousa et al., 2019), while also showing a strong association with risk behaviors, such as alcohol and drug use (Newcomb et al., 2011).

Sensation seeking is a personality trait that was initially studied by Zuckerman (1994), who defined this construct as a personality trait that reflects the need to experience diverse and complex sensations, which can often represent physical, legal, financial, and social risks. Thus, people with high levels of sensation seeking are characterized by looking for unusual situations that for others would be seen as dangerous and risky (Zuckerman, 1994; Zuckerman & Kuhlman, 2001), as well as they also tend to get involved in risky situations in an unreflective way (Ruch & Zuckerman, 2001).

This construct is considered as multifaceted, with different components such as: thrill and adventure seeking, experience seeking, disinhibition and boredom susceptibility (Zuckerman, 1994), and these four dimensions are considered relevant for the prediction of behavioral phenomena. The thrill and adventure seeking factor is related to a subject's desire to engage in sports and other activities that involve danger and speed. Experience seeking, on the other hand, consists of seeking experiences through the mind, sensations, travel, and through

a non-conformist lifestyle. The third dimension, disinhibition, is characterized by the desire for social and sexual disinhibition, which may be expressed, for example, by alcohol consumption. Lastly, boredom susceptibility is associated with intolerance to routine, repetition, predictable and boring people, and to feelings of discomfort when there is no change (Chitas, 2010; Zuckerman, 1994).

Sensation seeking and alcohol consumption

According to Zuckerman (2015), subjects who present high levels of sensation seeking and find themselves with low levels of arousal can look for exciting activities to increase their level of arousal. Accordingly, the literature reveals that sensation seeking has a consistent relation with consumption behavior (González-Iglesias et al., 2014; Labrie et al., 2014; Zuckerman & Kuhlman, 2001), and substance users have higher levels of sensation seeking than non-consumers (Zuckerman & Kuhlman, 2001) as well as a greater correlation with quantity and frequency of consumption (Labrie et al., 2014; Legrand et al., 2007).

In addition, a difference can be established in the relation between alcohol consumption and the search for sensations depending on gender. An investigation with young French university students concluded that there is a correlation between the disinhibition trait and the use of alcohol by women, while in men there is an association between the search for experiences trait and the disinhibition trait with alcohol consumption (Legrand et al, 2007). Also, in the study by Newcomb and Bentler (1989), a link between the sensation seeking subscales and alcohol consumption was found, however, these authors point out that this link does not exist in the search for experiences in men.

4- Relevance of the Present Study

Alcohol consumption can emerge from a search for feelings of well-being, that is, as a coping strategy that is shown to be ineffective and disadvantageous. Therefore, as already mentioned, risky alcohol consumption translates into serious risks to physical and psychological health (Ordem dos Psicólogos Portugueses, 2021).

Thus, and considering the period of COVID-19 which raised the daily consumption of the alcohol among the Portuguese from 12% to 25% (SICAD, 2020a), it is important to investigate the various intrinsic factors that can influence risky alcohol consumption, to find effective intervention and prevention strategies for mental health professionals.

5- Aims and Hypotheses

Considering all the theoretical framework presented so far, this study seeks to identify the patterns of alcohol consumption among university students, as well as to relate these consumptions with individual factors such as self-esteem and sensation seeking. Therefore, the objectives of this study are:

· Identify the patterns of alcohol consumption of university students.

· Analyze the relationship between alcohol consumption and self-esteem.

· Analyze the relationship between alcohol consumption and sensation seeking.

· Examine gender differences in alcohol consumption patterns.

These objectives allowed the construction of five research hypotheses that will be listed below:

H1: University students have a low-risk alcohol consumption pattern.

H2: Males are at higher risk for alcohol consumption than females.

H3: Alcohol consumption is correlated with the levels of self-esteem of university students.

H4: Alcohol consumption is correlated with sensation seeking.

H5: Male subjects at high risk of alcohol consumption have higher levels of sensation seeking than female subjects with the same risk of alcohol consumption.

METHOD

1- Participants

With the purpose of studying the phenomena previously described, the following criteria were defined for the selection of this study's sample: be a university student, be between 18 and 26 years old and be Portuguese.

In total, 558 participations were registered on the online questionnaire. Nonetheless, to meet the selection criteria, four were excluded from the sample because they weren't attending university and one for not being Portuguese.

Thus, the final sample consists of 553 Portuguese participants, currently attending university. It was identified that 55.5% were female and 44.5% were male, with an age distribution of: 18 years (15%), 19 years (18.4%), 20 years (17.4%), 21 years (16.5%), 22 years (13%), 23 years (9.9%), 24 years (4.3%), 25 years (2.7%) and 26 years (2.7%). As for the educational institution, the vast majority attend the University of Porto (49%), with students attending a bachelor's degree (60.6%), a master (18.1%), an integrated master (20.4%) or a doctorate (0.9%).

2- Measures and Instruments

To verify the hypotheses presented above, a composite instrument was developed resulting from the combination of the following instruments:

Sociodemographic data. The information obtained from the sociodemographic questionnaire presents the objective of characterizing the sample and, at

the same time, ensuring that all participants meet the criteria for inclusion in the study. Therefore, in this part of the questionnaire, questions about the college and course the participants attended were included, as well as the cycle and year of study they were enrolled. In addition, it was important to question the gender of the participants, their age and nationality.

Alcohol Use Disorders Identification Test (AUDIT). AUDIT is an assessment instrument developed by the World Health Organization (WHO) and based on the International Classification of Diseases, 10th revision (ICD-10) (Fonte & Mota-Cardoso, 2013; World Health Organization, 2001). This instrument is constituted by 10 questions, of which three relate to consumption (frequency and episodes of excessive intake), four are about symptoms of dependence (inability to stop, intake from awakening, transient amnesia, and guilt) and three other questions relate to problems caused by the consumption of alcohol (difficulty in performing normal activities, self and hete-ro-injuries, concern expressed by others) (Fonte & Mota-Cardoso, 2013). The answers are rated on a scale from 0 to 4, so the total score is between 0 and 40, which means that this instrument can detect different levels of alcohol consumption, ranging from low-risk consumption to dependence (SICAD, 2013). This test has a studied and proven validity in different regions of the world, thus having an intercultural validity. Furthermore, it also presents good psychometric properties, for example regarding the level of reliability in the test-retest and internal consistency, at the level of content and construct validity, predictive and convergent and also at the level of the normative criterion (Fonte & Mota-Cardoso, 2013; Sobell et al., 1994). Finally, AUDIT has been validated to the Portuguese population in 2002 (Cunha, 2002 cit in SICAD, 2013).

Rosenberg Self-Esteem Scale (RSES). RSES is a self-esteem assessment scale developed by Rosenberg (1989) and revised by Corcoran and Fischer (2000). The Portuguese version was developed by Pechorro, Marôco, Poiares and Vieira and validated for this population in 2011, through a sample of 760 participants of both sexes (Pechorro et al., 2011). This is a 10 item self-completion instrument with a Likert type scale, ranging from ''Strongly Disagree'' to ''Strongly Agree'', and its score is obtained by the sum of the items quotations, with high scores indicating high self-esteem. This scale presents appropriate psychometric properties, with correlations from .82 to .88 at the level of temporal stability, while at the level of internal consistency by Cronbach's alpha, values from .77 to .88 were obtained. In the Portuguese version, no deviations were found since both asymmetry and kurtosis remained within the acceptable range of-2 to 2 (Pechorro et al., 2011).

Brief Sensation Seeking Scale V (BSSS-V). The sensation seeking construct can be assessed by the short version of the Sensation Seeking Scale, developed by Zuckerman in 1978, adapted for the Portuguese population by Chitas (2010). This scale has a total of 8 items, two for the Thrill and Adventure Seeking factor, two for Experience Seeking, two for Disinhibition and two items for the Boredom Susceptibility dimension (Chitas, 2010). In BSSS-V scale, questions are formulated regarding your degree of agreement with a given statement, and participants should choose the option that best describes their way of feeling and being, on a 5-point scale based on ''Disagree Totally'' to ''Totally Agree'', so the total score is obtained by adding up all the items. Through the factorial component analysis of these 8 items, following the Kaiser criterion, it is possible to extract two factors, which explain 48.3% of the total variance, 35.1% of which is due to the first factor and 13.2% to the second factor. After the VARIMAX rotation, the proportional contributions of the two factors to the explained variance are respectively 29,1% and 19.2%. Considering all the items that make up this scale, it can be concluded that its internal consistency is 0.72 (Chitas, 2010).

3- Procedure

Regarding the data gathering procedure, the present study was widespread online on social networks, on multiple pages aimed to university students, in order to obtain the largest and most representative sample possible. This gathering took place between the month of September and November of 2021 through the channels mentioned above. The questionnaire, based on the instruments previously mentioned, was administered online through the 'Google Docs – Forms' platform.

Prior to completing the questionnaire, all participants were given the informed consent, in which various information could be read, such as: contextualization of the investigation and its objectives, anonymity and confidentiality of data, voluntary nature of participation, possibility of withdrawal throughout filling out the instrument and the display of contacts for possible clarification of doubts.

Subsequently, the process of selecting the participants was carried out, to ensure that all of them met the inclusion criteria defined above. Then, the data were analyzed using the statistical analysis program IPM Statistical Package for Social Sciences – 27 (SPSS). First, the items were recoded for analysis, namely item 2 («At times I think I am no good at all.»), 5 («I feel I do not have much to be proud of.»), 6 («I certainly feel useless at times. »), 8 («I wish I could have more respect for myself.») and 9 («All in all, I am inclined to feel that I am a failure.») of the Rosenberg Self-Esteem Scale. Then, the different items related to the Alcohol Use Disorders Identification Test were compressed into one, which was name "AUDIT", as well as the Rosenberg Self-Esteem Scale, which he named "AE" and the Brief Sensation Seeking Scale V named "BS". To answer the formulated hypotheses, descriptive and inferential statistics were used.

Although there was not found a normal distribution of the sample in the Kolmogorov-Smirnov test ($p < .001$) for the variables in study, parametric statistical procedures were applied, considering the size of the sample and since it is consensual in the literature that a skewness of less than 3 and a kurtosis of less than 10 is an acceptable range of values: AUDIT (2.064; 7.707), AE (-.150;-.576) and BS (-.129;-.369) (Kline, 2016; Matore & Khairani, 2020).

RESULTS

Before proceeding with the factor analysis of the instruments used, to assess the construct validity, the adequacy of the sample was examined using the Kaiser-Meyer-Olkin test (KMO). KMO values of the different instruments ranged from good to exceptional: .79 (BSSS-V); .85 (AUDIT); .92 (RSES), so the sample is suitable for Principal Component Analysis (PCA). Regarding the Bartlett's sphericity test, the significance of correlations in study was also verified: $\chi2 (45) = 2857.031$; $p<.001$ (BSSS-V); $\chi2 (45) = 1900.873$; $p<.001$ (AUDIT); $\chi2 (28) = 939.595$; $p<.001$. This means that the obtained correlation matrix is significantly different from the identity matrix of the variables under analysis.

Risk of alcohol consumption

The risk of alcohol consumption in university students was studied by recoding the AUDIT scale into the AUDITREC variable. This variable is organized into three groups with the following risk intervals (as proposed by the original instrument): 0 to 7 (low or abstainers), 8 to 19 (medium), and 20 or more (high). The group of abstainers and low risk of consumption were recoded as one group only due to the low number of participants with a score of 0 on the test (n=71). In this way, it is possible to understand how the population of this study fall into the categories of the AUDIT test, and 78.3% have low risk of alcohol consumption or are abstainers (n=433), 20.3% have medium risk of alcohol consumption (n=112), and only 1.4% have high risk of alcohol consumption (n=8). Through the observation of the distribution of the population by the different groups, it is possible to conclude that the vast majority is concentrated in the low risk of alcohol consumption pattern in university students.

About gender differences, it was conducted an independent-samples t-test to compare the AUDIT scores for males and females. There was a significant difference in scores for males (M= 5.54, SD=5.44) and females (M=4.57, SD=3.92; t (551) =-2.349, p = .02, two-tailed). The magnitude of the differences in the means was very small (*mean difference* =-.97, 95% *CI*:-1.78 to-.16, *eta squared* = .01).

SELF-ESTEEM

The relationship between alcohol consumption (as measured by AUDIT) and self-esteem (as measured by the Rosenberg Self-Esteem Scale) was investigated using Pearson product-moment correlation coefficient. There was not a correlation between the two variables, r = 0.007, p = 0.87.

It was also conducted another correlation between all individual items from the Rosenberg Self-esteem Scale (10 items) and the general alcohol consumption (as measured by AUDIT) using Pearson product-moment correlation coefficient. In this analysis, a small, positive correlation was found between the item «I am able to do things as well as most other people. » and a higher risk of consumption (r = 0.12, p = 0.005). Finally, a strong, negative correlation was found between the item «I wish I could have more respect for myself. » and the higher risk of consumption group (r =-0.93, p < 0.0001), which means that students who disagreed with this sentence were associated with a higher risk of alcohol consumption.

SENSATION SEEKING

The relation between the risk of alcohol consumption (as measured by the AUDIT) and sensation seeking (as measured by the BSSS-V) was investigated using Pearson product-moment correlation coefficient. There was a medium, positive correlation between the two variables, r = 0.42, p < .001, with a high risk of alcohol consumption being associated with high levels of sensation seeking.

To investigate possible gender differences an independent-samples t-test was conducted to compare the females and males with higher risk of consumption of alcohol and the level of sensation seeking. For this analysis all subjects with a score equal or greater than 8 were considered due to the low number of participants in the high risk of alcohol consumption group. There was no significant difference in scores for males (M= 29.19, SD=5.17) and females (M=28.60, SD=5.42; t (120) =-.61, p = .54, two-tailed). The magnitude of the differences in the means was very small (*mean difference* =-0.59, 95% *CI*:-2.50 to 1.32, *eta squared* = .003).

DISCUSSION

The present investigation aimed to identify the patterns of alcohol consumption of Portuguese university students, specifically the level of risk of alcohol use. In addition, it also presented as objectives to relate alcohol consumption with individual factors such as self-esteem and sensation seeking.

Thus, regarding the first hypothesis, it was found that young university students have low risk of alcohol consumption, which is in line with other studies carried out with this population (Cooke et al., 2019; Moreira et al., 2020). This low risk of alcohol consumption can be explained by the social acceptance of excessive alcohol ingestion in Portugal. Therefore, Portuguese university students tend to have a lower risk of alcohol consumption because this behavior has little acceptance, which is also evident in countries like Italy and Spain in contrast to others like Belgium and England (Cooke et al., 2019). However, the pandemic period may also have influenced the results, due to a change in the consumption habits of Portuguese students. In the data presented by SICAD (2020a) it is evident that the youngest (18 to 24 years old) and students were among the groups that most decreased their consumption during the COVID-19 period, in terms of frequency, abstinence and change in drinks ingested. These changes may be related to several reasons, such as: (1) not having the company of the people they used to drink with;

(2) liking to drink only outside the house (especially in festive contexts); and (3) looking for a healthier lifestyle in the face of the pandemic context (SICAD, 2020a). Thus, is important to refer that the percentage of college students with a low risk of alcohol consumption may be accentuated, due to the pandemic scenario. Several investigations highlight that this group has an alcoholic intake in specific events and contexts, such as academic parties, in which there is a normalization of alcohol consumption and it is expected to drink, serving alcohol as a tool to aid socialization, that is, in the contexts most affected by the pandemic in Portugal (Costa et al., 2016; Riordan et al., 2021; Rodrigues et al., 2014; SICAD, 2020a; Supski et al., 2017).

This investigation confirmed that there are gender differences regarding the risk of alcohol consumption, specifically that men are at a higher risk of alcohol consumption compared to women. In Portugal, as previously mentioned, men have a prevalence of 87% of alcohol consumption in contrast to women with a prevalence of 79% (SICAD, 2019). This trend can also be found in research with Portuguese university students (Costa et al., 2016; Moreira et al., 2020), as well as in international research that demonstrate that men drink more than women, independently from their ethnicity, religion, educational level, age and marital issues, which means women experience fewer social problems resulting from alcohol consumption when compared to men (Atkinson et al., 2012; Labas, 2016; Wilsnack et al., 2018). These gender differences may be due to what each culture determines as expected, which may influence beliefs about the effects of alcohol consumption in men as opposed to women. Thus, the culture of a country, especially in more conservative countries, leads to different attitudes towards consumption by men and women (Labas, 2016). Alcohol consumption by men is generally accepted in any culture and associated to masculinity, while consumption by women is seen as morally reprehensible and

a deviant behavior, so this last group is expected to avoid alcohol consumption (Damme et al., 2017; Labas, 2016; Wade, 2020).

A study by Atkinson and collaborators (2012) analyzed the content of magazines to understand how alcohol consumption was presented in them. They found that in magazines for the male audience, alcohol consumption was presented as essential to achieve masculinity, leaving a message that (1) when men get together, they should drink and (2) this expectation was applied to all men, even those who seek popularity and a healthy lifestyle. On the other hand, female magazines described female celebrities who regularly drank alcohol as problematic, hopeless, as having family problems and as aging badly (alcohol as harmful to beauty), for example. Furthermore, female alcohol users were described in men's magazines as noisy, vulnerable to violence, extremely emotional and they were highly sexualized (Atkinson et al., 2012). In conclusion, men may have a higher risk of alcohol consumption because that is what is expected from this group, while women may consume less and present a minor risk due to cultural issues that associate their consumption with a deviant behavior, as well as their fear of social sanctions. On the other hand, it is important to mention that several studies show a decrease in the differences in consumption patterns between men and women (Labas, 2016; Nolen-Hoeksema, 2004; Walters, 2020). This approximation in alcohol consumption patterns of both groups may be related to an increase in gender equality in other areas, such as a greater employment of women and, consequently, higher independence for this group (Labas, 2016).

No relationship was found between risk of alcohol consumption and self-esteem. This relationship had already been considered ambiguous, with some studies pointing to a positive correlation between both constructs while others indicating a negative correlation. Even so, some studies have also defined the relationship of

the alcohol consumption and self-esteem as a non-relationship (Kokkevi et al., 2007; Miller et al., 2002; Muñoz-París & Ruiz-Muñoz, 2008; Raffaelli et al., 2007). The relation found may be associated with the fact that consumption by young university students is mostly restricted to social contexts, which can consequently lead to less alarm and social responsibility (Meneses et al., 2013), and, as a result, to a lower impact of their alcohol consumption on their self-esteem.

There was a correlation between the construct sensation seeking and the risk of alcohol consumption. In this case, there was a positive correlation, that is, a higher sensation seeking value may be associated with higher risk of alcohol consumption. The relation between sensation seeking and alcohol consumption had already been extensively studied (Merino-Soto & Salas-Blas, 2018; Sousa et al., 2019), and may be positively associated with frequency (Hines & Shawn, 1993; Schimidt et al., 2017) and amount of alcohol consumed (Beard & Wolff, 2022; Costa, 2016; Longo et al., 2020), as well as binge drinking (Carlson et al., 2010; Legrand et al., 2007). Therefore, sensation seeking can be considered a predictor of alcohol consumption, and several causes can be considered for this relation between the two constructs: 1) individuals with high levels of sensation seeking may consume in order to seek new experiences (Ferreira, 2009), in fact sensation seeking is linked to the need for stimulation, so this alcohol consumption could be the result of experimentation, curiosity and the urge to try new activities (Palacios, 2015); 2) also, sensation seekers may drink in greater quantities due to the illegal risks associated with alcohol consumption that can be seen as a stimulant (Read et al., 2003; Zuckerman, 1994); 3) and, finally, a person with high levels of sensation seeking, may consider the risks associated with alcohol consumption to be lower when compared to subjects with low sensation seeking (Hoyle et al., 2002).

On the other hand, the last hypothesis was not confirmed, that is, there was no evidence of gender differences regarding the relation between the sensation seek construct and the risk of alcohol consumption. This goes against the trend found in the literature that points for different associations with the sensation seeking subscales regarding gender (Legrand et al., 2007) and that men have higher levels of sensation seeking than woman (Formiga, 2011, cit in Sousa et al., 2019). However, the vast majority of this sample is concentrated in the low-risk group for alcohol consumption. This can form a bias because it is the high levels alcohol consumption – and consequently the risk for it – that are associated with higher levels of sensation seeking (Palacios, 2018), that is more common in men. So, the small number of participants at higher levels of alcohol consumption risk in this investigation, could be the reason why these differences between genders is not highlighted.

CONCLUSION

1- Main remarks

In this study, it can be identified that university students have a low risk of alcohol consumption and that this risk varies according to gender, in particular, men have a higher risk of alcohol consumption when compared to women. In regard to the self-esteem variable, it was not identified a correlation with alcohol consumption. However, a positive correlation was identified between sensation seeking and risk of alcohol consumption, which may indicate that university students who present higher levels of sensation seeking have a greater risk of alcohol consumption, with no differences between genders in this relation.

2- Future implications

Understanding the consumption behavior of Portuguese university students, through tools such as AUDIT, makes it possible to identify problematic cases and carry out awareness or prevention actions in this population or in younger populations, such as high school students. Furthermore,

given the well-established relation between alcohol consumption and sensation seeking, the identification and prediction of young people with a high level of sensation seeking can be an important element to consider in prevention actions of risk behaviors (Palacios, 2018).

3- Limitations

There are some limitations in this investigation that need to be considered. The first limitation is related to the nature of this study. This study has a correlational nature, so it does not aim to investigate the causality of the phenomena. Thus, it is not possible to ensure any cause-effect relation between the phenomena studied, which is important for an in-depth understanding of the relation between alcohol consumption and the variables under study. In addition, the data collection was carried out in a single moment, so this is a cross-sectional study, which does not allow for an understanding of variations in alcohol consumption over time. Considering the time and resources reserved for this investigation, it was not possible to carry out a longitudinal study, however, these allow access to more information, and this method should be privileged whenever it is possible.

Regarding the sample of this study, it was impossible to obtain a representative sample of Portuguese university students. To this end, it would be necessary to ensure that the sample is representative of the Portuguese student population, in terms of gender, age, course and institution. When sharing the questionnaire through online platforms, it is not possible to determine the number of students who had contact with it, but chose not to respond, as well as the number of students who were not aware of it. For these reasons, the results found in this investigation cannot be generalized to Portuguese university students, allowing only to understand the reality regarding the subject in question. In this sense, the creation of an investigation in partnership with the different educational institutions would allow this sample to be larger and more representative of Portuguese university students.

The use of self-report scales, despite allowing completion without interference from third parties, does not guarantee the researcher that the answers obtained are not influenced by the phenomenon of social desirability. Despite ensuring that the data would be anonymous and issues such as confidentially, the topic of consumption is still subject to social disapproval, which can lead to a minimization of reality.

Finally, the pandemic period in which this investigation was carried out should also be highlighted. As previously mentioned, the COVID-19 period affected the consumption behaviors of university students, so these results could be different at a time when the main places of consumption of university students had not closed due to the pandemic.

3- Strengths

Despite the limitations of this study, this investigation makes it possible to compare the results obtained with data referring to other national and/or international research projects. Furthermore, according to Costa et al. (2016) in Portugal there are more studies on these topics with high school students that with university students, so carrying out the study in this population can be considered an asset. Also, although it is not possible to generalize for the Portuguese population with the sample under study, the existence of a balanced number of male and female participants is considered a positive point, which makes it possible to highlight possible gender differences and contributes to a higher representation of the sample. Finally, carrying out this study during the pandemic period leaves the possibility to, in the future, compare the relation between alcohol consumption in university students currently and in a pre-pandemic period.

3- Future directions

Finally, the elaboration of this study allowed to have more awareness of the issues addressed so far, as well as led to the emergence of other issues that would benefit from a deeper investigation in the future. It may also be important to investigate the relation between sensation seeking, gender and self-esteem with other substances, such as cannabis, which have become increasingly prevalent in the target population of this study (SICAD, 2020b). Furthermore, it would be interesting to explore the contexts where these consumptions tend to occur, that is, to study the relation between festive environments and the consumption of alcohol or even other substances. It would also be important to study the long-term impact of alcohol consumption on young people's development. At last, it would also be interesting to compare the consumptions made by university students and their peers who did not enroll in university studies/institutions, to see if the trend found in this study is verified in non-student peers.

REFERENCES

Atkinson, A., M., Kirton, A., W. & Sumnall, H., R. (2012). The gendering of alcohol in consumer magazines: an analysis of male and female targeted publications. *Journal of gender studies*, *21*(4), 365-386. https://doi.org/10.1080/09589236.2012.681180

Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest, 4*(*1*), 1–44. https://doi.org/10.1111/1529-1006.01431.

Beard, S. J. & Wolff, J. M. (2022). The moderating role of positive peers in reducing substance use in college students. *Journal of American college health, 70*(4), 1059-1070. https://doi.org/10.1080/07448481.2020.1784907

Branden, N. (2001). *The psychology of self-esteem: A revolutionary approach to self-understanding that launched a new era in modern psychology.* Jossey-Bass.

Carlson, S., R., Johnson, S., C. & Jacobs, P., C. (2010). Disinhibited characteristics and binge drinking among university student drinkers. *Addictive Behaviors, 35*(3), 242-251. https://doi.org/10.1016/j.addbeh.2009.10.020

Chitas, V., C. (2010). *Consumo de drogas e outros comportamentos de risco na adolescência* (Tese de Doutoramento não publicada). Universidade do Porto.

Collison, D., Banbury, S. & Lusher, J. (2016). Relationships between age, sex, self-esteem and attitudes towards alcohol use amongst university students. *Jornal of Alcohol and Drug Education, 60* (*2*), 16-34.

Cooke, R., Beccaria, F., Demant, J., Fernandes-Jesus, M., Fleig, L., Negreiros, J., Scholz, U., & Visser, R. (2019). Patterns of alcohol consumption and alcohol-related harm among European university students. *European Journal of Public Health*, *29*(6), 1125-1129. https://doi.org/10.1093/eurpub/ckz067

Cooper, M., L., Frone, M., R., Russell, M., Mudar, P. (1995). Drinking to regulate positive and negative emotions: a motivational model of alcohol use. *Journal of Personality and Social Psychology, 69*(5), 990–1005. https://doi.org/10.1037/0022-3514.69.5.990

Costa, A., Figueiredo, J., Monteiro, P., Costa, S. & Xavier, S. (2016). Caracterização dos padrões de consumo do álcool em estudantes da universidade de Aveiro. *Interações*, *12*(42*)*, 112-124.

Damme, J., V., Hublet, A., Clercq, B., D., Kuntsche, E., Maes, L., & Clays, E. (2017). Who does not cut down? Comparing characteristics and drinking motives of drinkers and abstainers during the exam periods. *Journal of American College Health*, *65*(8), 558-566. https://doi.org/10.1080/07448481.2017.1356311

DeHart, T., Tennen, H., Armeli, S., Todd, M., & Mohr, C. (2009). A diary study of implicit self-esteem, interpersonal interactions and alcohol consumption in college students. *Journal of Experimental Social Psychology, 45*(4), 720–730. https://doi.org/10.1016/j.jesp.2009.04.001

Esmaeelzadeh, S., Moraros, J., Thorpe, L., & Bird, Y. (2018). The association between depression, anxiety and substance use among Canadian post-secondary students. *Neuropsychiatric Disease and Treatment, 14*, 3241-3251. https://doi.org/10.2147/ndt.S187419

Ferreira, J., F., K., S. (2009). Busca de sensações e dependência alcoólica: um estudo com doentes alcoólicos (Tese de Mestrado não Publicada). Universidade do Porto.

Fonte, A. & Mota-Cardoso, R. (2013). MAST e AUDIT. Avaliação de caraterísticas psicométricas em doentes com dependência de álcool. *Acta Média Portuguesa, 26*(4), 335-340. ISSN: 1646-0758

Glindemann, K. E., Geller, S., & Fortney, J. N. (1999). Self-esteem and alcohol consumption: a study of college drinking behavior in a naturalistic setting. *Journal of Alcohol & Drug Education, 45*, 60-71.

González-Iglesias, B., Gómez-Fraguela, J., A., Gras, M., E. & Planes, M. (2014). Búsqueda de sensaciones y consumo de alcohol: el papel mediador de la percepción de riesgos y benefícios. *Anales de psicología*, *30*(3), 1061-1068. https://doi.org/10.6018/analesps.30.3.170831

Hines, A. M. & Shaw, G. A. (1993). Intrusive thoughts, sensation seeking, and drug use in college students. *Bulletin of the psychonomic society*, *31*(6), 541-544. https://doi.org/10.3758/BF03337347

Hoyle, R., H., Stephenson, M., T., Palmgreen, P., Lorch, E., P. & Donohew, R., L. (2002). Reliability and validity of a brief measure of sensation seeking. *Personality and Individual Differences*, *32*(3), 401-414. https://doi.org/10.1016/S0191-8869(01)00032-0

Kairouz, S., Gliksman, L., Demers, A., & Adlaf, E. M. (2002). For all these reasons, I do...drink: a multilevel analysis of contextual reasons for drinking among Canadian undergraduates. *Journal of Studies on Alcohol, 63*(5), 600–608. https://doi.org/10.15288/jsa.2002.63.600

Kline, R., B. (2016). *Principles and practice of structural equation modeling* (4th ed.). The Guilford Press.

Kokkevi, A., E., Arapaki, A., A., Richardson, C., Florescu, S., Kuzman, M., & Stergar, E. (2007). Further investigation of psychological and environmental correlates of substance use in adolescence in six European countries. *Drug and Alcohol Dependence*, *88*(2-3), 308-312. https://doi.org/10.1016/j.drugalcdep.2006.10.004

Labas, S., D. (2016). Alcohol use: social aspect, gender differences and stigmatization. *Alcoholism and Psychiatry Research*, *52*, 51-64.

LaBrie, J. W., Kenney, S. R., Napper, L. E., & Miller, K. (2014). Impulsivity and alcohol-related risk among college students: examining urgency, sensation seeking and the moderating influence of beliefs about alcohol's role in the college experience. *Addictive Behaviors, 39*(1), 159–164. https://doi.org/10.1016/j.addbeh.2013.09.018

Legrand, F., D., Gomà-i-freixanet, M., Kaltenbach, M., L. & Joly, P., M. (2007). Association between sensation seeking and alcohol consumption in French college students: some ecological data collected in ''open bar'' parties. *Personality and Individual Differences, 43*(7), 1950-1959. https://doi.org/10.1016/j.paid.2007.05.003

Longo, L., M., Ertl, M., M., Pazienza, R., Agiliga, A., U., Dillon, F., R. & Martin, J., L. (2020). Associations among negative urgency, sensation seeking, alcohol use, self-esteem, and casual sexual behavior for college students. *Substance Use & Misuse. 55*(5), 769-805. https://doi.org/10.1080/10826084.2019.1703748

Maldonado, R., M., Pedrão, L., J., Castillo, M., M., A., García, K., S., L & Rodríguez, N., N., O. (2008). Auto-estima, auto-eficácia percebida, consumo de tabaco e álcool entre estudantes do ensino fundamental, das áreas urbana e rural, de Monterrey, Nuevo León, México. *Revista Latino-Americana de Enfermagem*, 16.

Matore, E., M., & Khairani, A., Z. (2020). The pattern of skewness and kurtosis using mean score and logit in measuring adversity quotient (AQ) for normality testing. *International Journal of Future Generation Communication and Networking*, *13*(1), 688-702.

Meneses, C., Markez, I., Romo, N., Uroz, J., Rua, A., & Laespada, T. (2013). Diferencias de género en el consumo diária de tabaco y intensivo de alcohol en adolescentes latino-americanos en tres áreas españolas (Andalucía, Madrid y País Vasco). *Revista de la Asociación Española de Neuropsiquiatría*, *33*(119), 525-535. https://doi.org/10.4321/S0211-57352013000300005

Merino-Soto, C. & Salas-Blas, E. (2018). Escala breve de búsqueda de sensaciones (BSSS): estrutura latente de las versiones de 8 y 4 ítems en adolescentes peruanos. *Adicciones, 30*(1), 41-53. https://doi.org/10.20882/adicciones.842

Miller, P., Plant, M., Choquet, M., & Ledoux, S. (2002). Cigarettes, alcohol, drugs and self-esteem: a comparison of 15-16-year-old from France and the UK. *Journal of Substance use, 7*(2), 71-77. https://doi.org/10.1080/14659890210132090

Moreira, M., T., F., Lima, A., M., N., Tavares, M., J. & Barroso, T. (2020). Levels of alcohol consumption in university students in the northern region of Portugal. *Cogitare Enfermagem*, *25*. http://doi.org/10.5380/ce.v25i0.74457

Muñoz-París, M. J. & Ruiz-Muñoz, A. M. (2008). Nivel de autoestima y correlación con comportamentos de reisgo en alunos de la Universidad de Almería. *Enfermería Cliníca, 18*(29), 70-76.

Neumann, C., A., Leffingwell, T., R., Wagner, E., F., Mignogna, J. & Mignogna, M. (2009). Self-esteem and gender influence the response to risk information among alcohol using college students. *Journal of substance use, 14*(6), 353-363. https://doi.org/10.3109/14659890802654540

Newcomb, M. D., & Bentler, P. M. (1989). Substance use and abuse among children and teenagers. *American Psychologist*, *44*(2), 242–248. https://doi.org/10.1037/0003-066X.44.2.242

Newcomb, M., E., Clerkin, E., M. & Mustanski, B. (2011). Sensation seeking moderates the effects of alcohol and drug use prior to sex on sexual risk in young men who have sex with men. *AIDS and Behavior*, *15*(3), 565-575. https://doi.org/10.1007/s10461-010-9832-7

Nolen-Hoeksema, S. (2004). Gender differences in risk factors and consequences for alcohol use and problems. *Clinical Psychology Review*, *24*(8), 981-1010. https://doi.org/10.1016/j.cpr.2004.08.003

Ordem dos Psicólogos Portugueses (2021*). Perguntas e respostas consumo (problemático) de álcool*. Retrieved from:

https://www.ordemdospsicologos.pt/ficheiros/documentos/perguntasrespostas_consumoalcoolproblematico.pdf

Palacios, J. (2015). Propiedades psicométricas del inventario de búsqueda de sensaciones para adolescentes en México (IBS-Mx). *International Journal of Psychological Research*, *8*(1), 46-60. https://doi.org/10.21500/20112084.644

Palacios, J. (2018). Interplay between sensation seeking and risky alcohol drinling in Mexican adolescents: an structural modeling equation approach. *International Journal of Psychological Research, 11*(2), 19-26. https://doi.org/10.21500/20112084.3332

Pechorro, P., Marôco, J., Poiares, C. & Vieira, X., R. (2011). Validação da Escala de Auto-estima de Rosenberg com adolescentes portugueses em contexto forense e escolar. *Arquivos de Medicina, 25*(6), 174-179.

Raffaelli, M., Stone R., A., T., Iturbide, M., I., McGinley, M., Carlo, G., & Crockett, L., J. (2007). Acculturation, gender, and alcohol use among Mexican American college students. *Addictive Behaviour*, *32*(10), 2187-2199. https://doi.org/10.1016/j.addbeh.2007.02.014

Read, J., P., Wood, M., D., Khaler, C., W., Maddock, J., E. & Palfai, T., P. (2003). Examing the role of drinking motives in college student

alcohol use and problems. *Psychology of addictive behaviors*, *17*(1), 13-23. https://doi.org/10.1037/0893-164X.17.1.13

Riordan, B. C., Flett, J. A. M., Cody, L. M., Conner, T. S., & Scarf, D. (2021). The Fear of Missing Out (FoMO) and event-specific drinking: the relationship between FoMO and alcohol use, harm, and breath alcohol concentration during orientation week. *Current Psychology*, *40*, 3691–3701. https://doi.org/10.1007/s12144-019-00318-6

Rodrigues, P., F., S., Salvador, A., C., F, Lourenço, I., C. & Santos, L., R. (2014). Padrões de consumo de álcool em estudantes da Universidade de Aveiro: relações com comportamentos de risco e stress. *Análise Psicológica*, *4*(32), 453-466. https://doi.org/10.14417/ap.789

Roemer, A., & Walsh, Z. (2014). Where you live matters: the roles of living arrangement and self-esteem on college students' hazardous drinking behaviors. *Addiction Research & Theory, 22*(6), 474–480. https://doi.org/10.3109/16066359.2013.877454

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton University Press.

Ruch, W. & Zuckerman, M. (2001). Sensation seeking in adolescents. In J. Raithel (Ed.), *Risikoverhaltensweisen Jugendlicher: Erklärungen, Formen und Prävention* [Risk behavior of adolescents: Explanations, forms and prevention] (pp. 97-110). Leske + Budrich. https://doi.org/10.5167/uzh-77819

SICAD (2013). *Rede de referenciação/articulação no âmbito dos comportamentos aditivos e das dependências*. Retrieved from: http://www.sicad.pt/PT/Intervencao/RedeReferenciacao/Documents/Rede_de_Referenciacao_17_03_2014.pdf

SICAD (2019). *Relatório anual 2019: a situação do país em matéria de álcool*. Retrieved from: http://www.sicad.pt/BK/Publicacoes/Lists/SICAD_PUBLICACOES/Attachments/168/RelatorioAnual_2019_%20ASituacaoDoPaisEmMateriaDeAlcool_PT.pdf

SICAD (2020a). *Comportamentos aditivos em tempos de COVID-19: álcool*. Retrieved from:http://www.sicad.pt/BK/EstatisticaInvestigacao/EstudosConcluidos/Lists/SICAD_ESTUDOS/Attachments/209/covid_alcool.pdf

SICAD (2020b). *Relatório anual 2020: a situação do país em matéria de drogas e toxicodependências*. Retrieved from:

https://www.sicad.pt/BK/Publicacoes/Lists/SICAD_PUBLICACOES/Attachments/175/Sum%C3%A1rioExecutivo_RA%20Drogas_%2020.pdf

Skidmore, C. R., Kaufman, E. A., & Crowell, S. E. (2016). Substance use among college students. *Child and Adolescent Psychiatric Clinics of North America, 25*(4), 735-753. https://doi.org/10.1016/j.chc.2016.06.004

Sobell, L. C., Toneatto, T., & Sobell, M. B. (1994). Behavioral assessment and treatment planning for alcohol, tobacco, and other drug problems: current status with an emphasis on clinical applications. *Behavior Therapy, 25*(4), 533–580. https://doi.org/10.1016/S0005-7894(05)80199-6

Sousa, K., P., A., Medeiros, E., D., Silva, P., G., N. & Couto, R. (2019). Correlatos do uso de álcool e busca de sensações em estudantes universitários. In B., R., S., Neto (Eds) *Saúde Pública e Saúde Coletiva: Dialogando sobre Interfaces Temáticas 3* (pp. 43-54), Atena Editora. https://doi.org/10.22533/at.ed.9071902096

Supski, S., Lindsay, J., & Tanner, C. (2017). University students' drinking as a social practice and the challenge for public health. *Critical Public Health*, *27*(2), 228–237. https://doi.org/10.1080/09581596.2016.1190001

Szinay, D., Tombor, I., Garnett, C., Boyt, N. & West, R. (2019). Associations between self-esteem and smoking and excessive

alcohol consumption in the UK: a cross-sectional study using the BBC UK Lab database. *Addictive Behaviors Reports, 10*. https://doi.org/10.1016/j.abrep.2019.100229

Walters, G., D., (2020). Affective drinking motives, delinquency and binge drinking; a comparison of male and female high school seniors. *Alcohol and Alcoholism*, *55*(5), 571-577. https://doi.org/10.1093/alcalc/agaa070

Wilsnack, R. W., Wilsnack, S. C., Gmel, G., & Kantor, L. W. (2018). Gender differences in binge drinking: prevalence, predictors, and consequences. *Alcohol Research: Current Reviews, 39*(1), 57–76.

World Health Organization (2001). *AUDIT: The Alcohol Use Disorders Identification Test: guidelines for use in primary health care* / Thomas F. Babor ... [et al.], 2nd ed. World Health Organization.

World Health Organization, (2007). *Alcohol and injury in emergency departments: summary of the report form the WHO collaborative study on alcohol and injuries*. WHO Library Cataloguing-in-Publication.

Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking.* Cambridge University Press.

Zuckerman, M. (2015). *Sensation Seeking: Beyond the Optimal Level of Arousal*. Psychology Press.

Zuckerman, M., & Kuhlman, D. M. (2001). Personality and Risk-Taking: Common Biosocial Factors. *Journal of Personality, 68*(6), 999–1029. https://doi.org/10.1111/1467-6494.00124

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