











ORIGINAL ARTICLE

Prevalence of Alcohol Use and Alcohol Use Disorder and Risk Factors among University Students: A Cross-Sectional Study in Trabzon, Türkiye

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Main Points

- The results show that the rate of alcohol use among university students is significantly higher than that of the general population.
- The identified risk factors included students staying away from the family, students' use of any tobacco product.
- A close friend's alcohol use was found to be the factor that increased the risk the most.

Abstract

The aim of the study was to evaluate the prevalence of alcohol use, prevalence of alcohol use disorders, and risk factors among university students in Trabzon province. This study was a cross-sectional study conducted on undergraduate and associate degree students studying at universities. The questionnaire was administered to 6492 undergraduate students to ensure a representative sample of 33201 students from all faculties and grade levels. The prevalence of alcohol use disorder was determined with the Alcohol Use Disorders Identification Test. Alcohol use disorder is defined as a score of eight points and above on the Alcohol Use Disorders Identification Test. Multivariate logistic regression analyses were performed to examine factors associated with alcohol use and alcohol use disorder. The prevalence of alcohol use was 24.1% (95% CI 23.0 – 25.2) and the prevalence of alcohol use disorder was 4.9% (95% CI 4.3 – 5.4) among 6213 students included in the analysis. Among 6213 students included in the analysis, the prevalence of alcohol use was 24.1% (95% CI 23.0 – 25.2) and the prevalence of alcohol use disorder was 4.9% (95% CI 4.3 – 5.4). The results show that the rate of alcohol use among university students is significantly higher than that of the general population. Residing separately from the family, students using any tobacco product, parents using alcohol, and close friends using alcohol were found to be risk factors.

Keywords: Alcohol use disorders, binge drinking, prevalence, risk factors, university students drinking

Introduction

Alcohol use impacts adverse health, social, and legal outcomes, which are interrelated (Griswold et al,

2018). Alcohol use is a significant risk factor for many diseases, disabilities, and mortality, and can lead to alcohol use disorder (AUD) (Alcohol Use, 2018). Alcohol use disorders negatively impact individuals,

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families, and society, yet the global disease burden from alcohol continues to rise, with one-third affecting people aged 15 – 29 (Das et al., 2016). According to data from the Turkish Statistical Institute, the prevalence of alcohol use between the ages of 15 and 24 increased between 2010 and 2019 in Türkiye (2010: 8.6%; 2012: 7.4%; 2014: 13.3%; 2016: 9.3%; 2019: 11.4%) (TÜİK, 2019). In a general population survey conducted in 25 provinces in Türkiye, the lifetime prevalence of alcohol use was found to be 28.3% and alcohol use in the last 12 months was found to be 14.3% (Ilhan et al., 2016). Studies on university students in Türkiye from 2003 to 2019 reported alcohol use prevalence between 16.9% and 65.3% (Alaçam et al., 2015; Çam et al., 2020; Coşkun et al., 2019; Dayı et al., 2015; Demirci & Eker, 2017; Görgün et al., 2010; Havaçeliği Atlam & Yüncü, 2017; Koca & Oğuzöncül, 2015; Yılmaz et al., 2020). Alcohol use disorder prevalence was found to be 4.9% and 13.5% in studies conducted on university students in 2013 and 2019, respectively (Çam et al., 2020; Havaçeliği Atlam & Yüncü, 2017). Young adults are considered the most at-risk group for alcohol use. Despite alcohol being prohibited in higher education institutions and the implementation of Türkiye's anti-addiction education program since 2014, alcohol use remains high among university students compared to the general population (Ayvasık & Sümer, 2010; Görgün et al., 2010; Havaçeliği Atlam & Yüncü, 2017).

Prevalence studies among university students are essential to assess the scope of health problems and identify priority areas for public health interventions. The COVID-19 pandemic has significantly impacted students in Trabzon, as well as across Türkiye and globally. The uncertainties caused by school closures and the shift to online learning (e.g., access to technology, dormitory closures, and job losses for working students) may have led to notable behavioral changes. Stress, economic shifts, and changes in living conditions, such as moving out of dorms or in with friends, could have influenced alcohol use patterns. The study evaluated the prevalence of alcohol use, hazardous drinking, and contributing factors among university students in Trabzon. Students who completed the questionnaire form appropriately were included in the analysis.

Material and Methods

Population and Data Collection

Cross-sectional surveys allow for the cost-effective screening of multiple health problems or diseases within a single survey, known as “multi-purpose scans”. To assess the prevalence and factors influencing tobacco, substance, alcohol use, and behavioral addictions, an integrated project was planned involving students from three universities in Trabzon. Three studies with different aims and hypotheses were conducted within this project.

The sample size for the project was calculated using Open Epi Version 3.01 software. For Karadeniz Technical University, with a population of 19,820 students (excluding waiting, second education, and preparatory students), the minimum sample size was 2708, based on a 50% expected prevalence, 1.75% deviation, and 95% CI. To account for potential errors, the sample size was increased by 25%, targeting 3500 participants. The study was later expanded to include Trabzon University and Avrasya University. Based on Karadeniz Technical University sample/population ratio (0.18), the target sample size was set at 1800 for Trabzon University (out of 8983 students) and 700 for Avrasya University (out of 4398 students). The sample was weighted by

faculties, programs, and academic years to ensure representativeness. Participants were informed on the first page of the questionnaire and a box was left for informed consent approval. The consenting students checked the box and agreed to participate in the study. About 6492 undergraduate students who agreed to participate in the study participated in the survey.

Assessment of Alcohol Use and Alcohol Use Disorder

The student's alcohol use status was determined by comparing their response to the question “Do you use alcohol?” with their responses to the Alcohol Use Disorders Identification Test (AUDIT) scale. Students who had consumed alcohol within the past 12 months were classified as alcohol users. Terms from the WHO “Global Status Report on Alcohol and Health” were adapted into Turkish as “consumes,” “doesn't consume,” and “never consume” based on definitions from the 2020 Health Statistics Yearbook (TÜİK, 2019).

AUDIT, developed by the World Health Organization in 1989, is the gold standard for screening AUD (Saunders et al., 1993). The Turkish version's validity and reliability were established by Saatçioğlu et al. (Evren, 2019). The scale's total score is 40, and a score of eight or above indicates AUD (hazardous or harmful use). Alcohol Use Disorders Identification Test is a widely used, reliable tool that accurately predicts AUD based on DSM-5 diagnostic criteria (Foxcroft et al., 2015; Hagman, 2016). Measurement invariance for AUDIT has been confirmed across gender, age, and education levels (Skogen et al., 2019).

The study's dependent variables were alcohol use status and AUD status. Independent variables included sociodemographic and personal characteristics, reasons for alcohol use, and factors related to university education.

Statistical Analysis

The research data were analyzed using the IBM SPSS 23.0 (IBM SPSS Corp.; Armonk, NY, USA) software. Descriptive statistics were presented as numbers and percentages. Categorical variables were compared using the chi-square test. Multivariate analysis was conducted with the binary logistic regression test. One of the correlated factors was added to the model and variables with a high amount of missing data were not added to the model. Model fit was evaluated with the Hosmer-Lemeshow Test. The Nagelkerke R² value was used to evaluate the explanatory power. The data were standardised according to age. A *p*-value of less than .05 was considered statistically significant.

Ethical Approvals

The approval letter (2021/372) and letter dated June 28, 2022 (numbered 24237859 – 412) were obtained from Karadeniz Technical University, Scientific Research Ethics Committee. The research was supported by Karadeniz Technical University Scientific Research Projects (BAP) Coordination Unit.

Results

Among the 6213 students analyzed, 24.1% were current alcohol users, and 4.9% had AUD. The prevalence of current alcohol use by university was 26.4% at Karadeniz Technical University, 17.6% at Trabzon University, and 26.4% at Avrasya University. The prevalence of AUD was 4.9% at Karadeniz Technical University,

4.0% at Trabzon University, and 6.6% at Avrasya University (Figure 1). Factors associated with alcohol use and AUD prevalence are shown in Table 1, with the most common reason for alcohol use being to have fun. Table 2 presents the reasons for alcohol use among students with and without AUD.

Multivariate analysis results for alcohol use and AUD risk factors are shown in Table 3. For alcohol use, risk factors included male gender, living in student housing, tobacco use, maternal and paternal alcohol use, and alcohol use by close friends. Studying at Trabzon was found to be protective, while academic year and faculty type were not significant. For AUD, male gender, paternal alcohol use, and alcohol use by close friends were identified as risk factors. Parental education level and university-related factors (academic year, faculty type) were not associated with AUD risk.

Discussion

This study evaluated the prevalence of AUD and influencing factors among students studying at three different universities in the province of Trabzon in the north of Türkiye and provides data for studies to be conducted to prevent alcohol use among university students.

Alcohol Use Prevalence Risk Factors

In this study, the prevalence of alcohol use among university students within the last 12 months was 24.1%. Previous studies conducted in Türkiye between 2003 and 2019 reported alcohol use rates among university students ranging from 16.9% to 65.3% (Alaçam et al., 2015; Çam et al., 2020; Coşkun et al., 2019; Dayi et al., 2015; Demirci & Eker, 2017; Görgün et al., 2010; Havaçeliği Atlam & Yüncü, 2017; Koca & Oğuzöncül, 2015; Yılmaz et al., 2020).

A 2020 study in Myanmar involving 2349 students from seven universities found a lifetime alcohol use prevalence of 36.2%, with 20.3% reporting use in the last 30 days (Htet et al., 2020). In Botswana, a 2018 study of 2000 students reported a 31.9% prevalence of alcohol use (Olashore et al., 2017). A study conducted in 2018 in Iran with 7330 students found a 7.8% prevalence

of alcohol use in the last year (Taremian et al., 2018), while a 2017 study in Nigeria reported a lifetime alcohol use prevalence of 27.5% among 2412 students (Oe et al., 2017). In the USA, a 2017 study found that 91.3% of medical students at a university in Minnesota had consumed alcohol in the past year (Ayala et al., 2017). A 2015 study in Serbia involving 2285 students reported a 77.7% prevalence of alcohol use (Višnjić et al., 2015).

Comparing these results, the alcohol use prevalence in the study was lower than in Myanmar, Botswana, Serbia, and the USA but higher than in Iran, and similar to that in Nigeria. Differences in how alcohol use was measured (e.g., lifetime vs. past 12 months), study years, regions, and definitions of alcohol use may explain these variations. Other factors include national alcohol policies, community actions, alcohol availability, marketing and advertising restrictions, and pricing policies (Chegeni et al., 2020). University alcohol policies may have also influenced the differences in results. Globally, alcohol use prevalence is reported at 43.0%, with regional variations: 32.2% in Africa, 54.1% in the USA, 2.9% in the Eastern Mediterranean, 59.9% in Europe, 33.1% in Southeast Asia, and 53.8% in the Western Pacific (Griswold et al., 2018). This study found a higher rate compared to the predominantly Muslim Eastern Mediterranean region and lower rates compared to other regions. Cultural differences and varying policies between countries may contribute to these differences.

The COVID-19 pandemic has been linked to increased stress, anxiety, and depression, particularly among university students, and alcohol use has been associated with heightened stress and anxiety during this time (Gavurova et al., 2020). In a 2020 online survey in the USA, 26.9% of university students reported increased alcohol consumption during the pandemic (Firkey et al., 2022). Although this study was conducted during a period of relaxed COVID-19 restrictions and does not compare pre- and post-pandemic periods, it is well-documented that university students were affected by the pandemic's global impact (Aslan et al., 2020; Gavurova et al., 2020; Pollard et al., 2020).

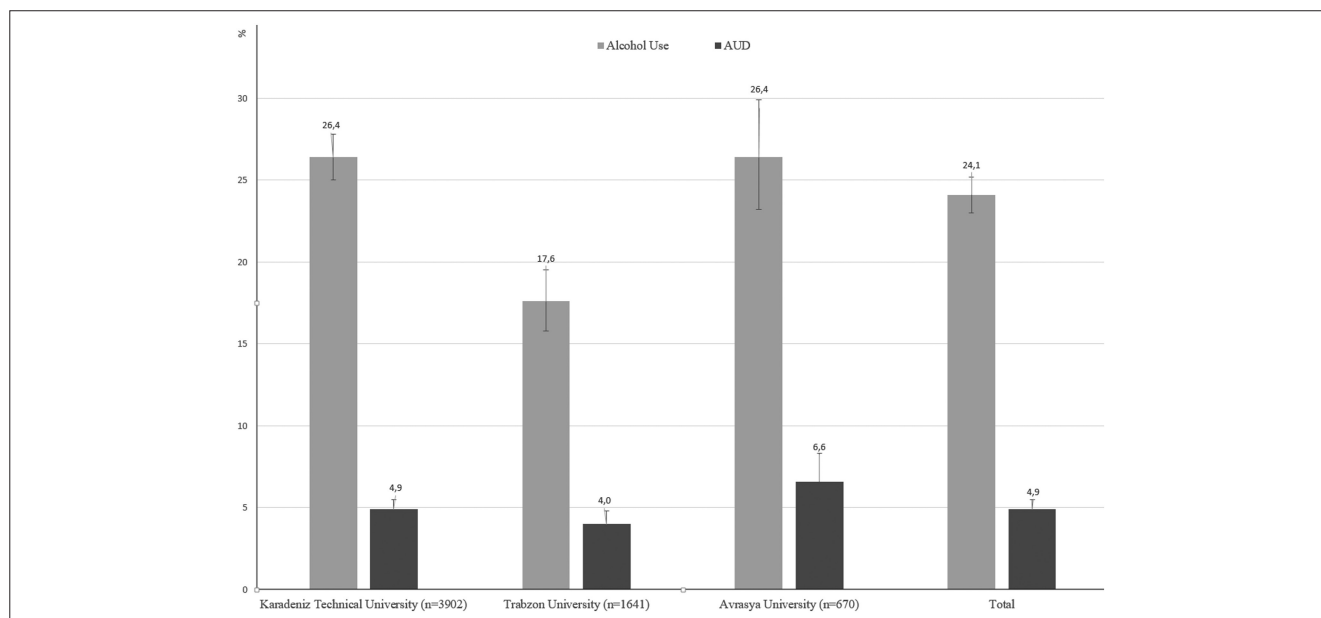


Figure 1. The prevalence of university students' alcohol use and alcohol use disorders.

Table 1.
Students' Sociodemographic and Personal Characteristics
(N = 6213)

	Alcohol Use			AUD		
	n	%*	p	n	%*	p
Sex (n = 6213)						
Female	648	17.9	<.001	89	2.5	<.001
Male	848	32.6		213	8.2	
Age (year) (n = 6213)						
19 or under	288	20.7	<.001	46	3.3	.003
20 – 21	664	23.1		142	4.9	
22 or over	544	28.0		114	5.9	
Academic year (n = 6213)						
1st class	449	21.9	<.001	88	4.3	.310
2nd class	463	22.5		111	5.4	
3rd class	260	27.2		42	4.4	
4th class and above	324	28.1		61	5.3	
Faculty Type (n = 6213)						
Health-related	308	24.9	.440	62	5.0	.770
Non-health related	1188	23.9		240	4.8	
Place of residence (n = 6200)						
Home with family	356	17.7	<.001	69	3.4	<.001
Shared student house	511	45.1		119	10.5	
Dormitory	626	20.5		112	3.7	
Tobacco use						
User	919	55.9	<.001	239	14.5	<.001
Does not use	574	12.6		62	1.4	
Maternal education (n = 6193)						
Elementary or below	778	19.5	<.001	154	3.9	<.001
Secondary education	448	30.6		92	6.3	
Higher education	263	35.4		56	7.5	
Paternal education (n = 6142)						
Elementary or below	602	20.6	<.001	126	4.3	.051
Secondary education	487	25.9		103	5.5	
Higher education	394	29.3		71	5.3	
Mother alcohol use status (n = 5607)						
User	135	81.3	<.001	27	16.3	<.001
Does not use	1244	22.9		240	4.4	
Father's alcohol use status (n = 5562)						
User	393	66.3	<.001	82	13.8	<.001
Does not use	976	19.6		186	3.7	

(Continued)

Table 1.
Students' Sociodemographic and Personal Characteristics
(N = 6213) (Continued)

	Alcohol Use			AUD		
	n	%*	p	n	%*	p
Close friend alcohol use status (n = 5616)						
User	706	62.5	<.001	161	14.2	<.001
Does not use	655	14.6		105	2.3	

AUD, alcohol use disorder.

* The column percentage is given.

#(1 USD =13.3197 TL on 31st December 2021 for the X1, 1 USD=15.9094 TL May 20, 2020 for the X2, and 1 USD = 17.1865 TL on June 10, 2022 for the X3).

In a 2011 study by Atlam involving 1,434 students at Ege University, the lifetime prevalence of alcohol use was 55.6% (Havaçeliği Atlam & Yüncü, 2017). The results of this study are comparable to those from Nigde Halisdemir University but lower than those from other studies. This difference may be due to this study reflecting alcohol use in the last 12 months, while many other studies report lifetime prevalence. Additionally, this study included students from all departments and faculties at all universities in Trabzon, whereas other studies did not specify which departments were involved. Factors such as the presence of anti-addiction centres or the activities of health, culture, and sports departments at universities may also have contributed to the differences in alcohol use prevalence.

In a 2015 study conducted with 7905 university students in Spain, risky alcohol use prevalence was 45.5% in females and 54.5% in males (López et al., 2019). These findings, along with other national

Table 2.
Reasons for Alcohol Use According to Having or Not Having Alcohol Use Disorder

	Total		AUD		Non-AUD		p
	n	%*	n	%*	n	%*	
Having fun	1075	71.9	225	74.5	850	71.2	253
Feeling good	557	37.2	147	48.7	410	34.3	<.001
Like the taste	463	30.9	119	39.4	344	28.8	<.001
Adapting to environments	249	16.6	62	20.5	187	15.7	.042
Psychological problems	174	11.6	85	28.1	89	7.5	<.001
Being a family habit	41	2.7	16	5.3	25	2.1	.002
Presence of financial problems	39	2.6	17	5.6	22	1.8	<.001
Envy those who use it	9	0.6	3	1.0	6	0.5	.324
No special reason	383	25.6	54	17.9	329	27.6	<.001

AUD, alcohol use disorder.

*The column percentage is given.

Table 3.
Regression Analysis of Factors Associated with Alcohol Use and Alcohol Use Disorder

		Alcohol Use*	AUD**
		AOR (95% CI)	AOR (95% CI)
Age	Year	1.01 (0.97 – 1.05)	1.03 (0.97 – 1.09)
Sex	Female	1	1
	Male	1.45 (1.24 – 1.71)	2.09 (1.55 – 2.81)
Place of residence	Home with family	1	1
	Shared student house/dormitory	1.38 (1.16 – 1.67)	1.17 (0.84 – 1.62)
Tobacco use	Does not use	1	1
	User	6.85 (5.81 – 8.07)	7.71 (5.53 – 10.74)
Maternal education	Elementary and below	1	1
	Secondary education	1.46 (1.19 – 1.79)	1.26 (0.89 – 1.78)
	Higher education	1.59 (1.21 – 2.011)	1.53(0.98 – 2.41)
Paternal education	Elementary and below	1	
	Secondary education	0.94 (0.77 – 1.15)	0.84(0.59 – 1.18)
	Higher education	1.14 (0.90 – 1.45)	0.77(0.51 – 1.16)
Mother's alcohol use	Does not use	1	1
	User	3.69 (2.12 – 6.46)	1.08(0.59 – 1.98)
Father's alcohol use	Does not use	1	1
	User	4.44 (3.44 – 5.71)	1.89(1.31 – 2.73)
Close friend's alcohol use	Does not use	1	1
	User	5.78 (4.84 – 6.89)	3.04(2.27 – 4.08)
Academic year	1st class	1	1
	2nd class	1.01 (0.82 – 1.24)	1.25(0.88 – 1.78)
	3rd class	1.26 (0.97 – 1.62)	0.92(0.59 – 1.44)
	4th class and above	1.18 (0.92 – 1.53)	1.06(0.69 – 1.64)
Faculty type	Health-related	1	1
	Non-health related	1.05 (0.86 – 1.30)	0.95 (0.66 – 1.36)
Model p-value		<0.001	<0.001

AOR, adjusted odds ratio; AUD, alcohol use disorder.

*Nagelkerke R Square: 0.451 Hosmer and Lemeshow Test: 0.549.

**Nagelkerke R Square: 0.267 Hosmer and Lemeshow Test: 0.726.

and international studies, align with the results, which also show that alcohol use is higher among males than females (Demirci & Eker, 2017; Gavurova et al., 2020). A global burden of disease review on alcohol use in 195 countries found that the gender gap in alcohol use is linked to socioeconomic status (SES). As SES increases, the difference in alcohol use between men and women narrows; as SES decreases, alcohol use among women declines. Additionally, societal expectations regarding women's roles in motherhood, pregnancy, and caregiving, combined with the harmful effects of alcohol on pregnancy, may deter women from drinking. Cultural perceptions and biological differences, such as lower alcohol tolerance in women, may also explain the lower prevalence of alcohol use among females (Sánchez-Puertas et al., 2022).

In univariate analysis, both maternal and paternal education levels significantly affected students' alcohol use. However, in

multivariate analysis, only maternal education was found to be a risk factor. The risk of alcohol use was 1.46 times higher for students whose mothers had completed secondary education and 1.57 times higher for those whose mothers had completed higher education compared to those whose mothers had a primary education or less. In a study conducted at Kırklareli University with 902 university students, it was reported that the risk of alcohol use of students whose mothers were graduates of higher education was 3.3 times higher than that of the group whose mothers were illiterate or literate (Ulukoca et al., 2013). Another study in 2018 found that as maternal education increased, so did the prevalence of alcohol use, and paternal education was also linked to alcohol use (Güner, 2019). This may be because women with higher education are often more distanced from traditional structures, potentially influencing their views on alcohol use or fostering a positive attitude towards it. Higher education levels may also

bring social environments and professional life where alcohol use is more accepted, and greater economic independence may provide students with more resources for alcohol consumption.

In this study, alcohol use by close friends was found to increase the risk of alcohol use by 5.76 times. A 2020 study among university students in Myanmar found that alcohol use by close friends increased the likelihood of alcohol use by 7.5 times (Htet et al., 2020). Similarly, a 2018 study in Iran reported that alcohol or substance use by close friends raised the risk of alcohol use by 3.2 times (Taremi et al., 2018). These findings, including this study, consistently show that alcohol use among close friends is a significant risk factor. The sense of belonging within friend groups may encourage group drinking behaviors, leading to increased alcohol use, especially during university years when peer influence is stronger, and social interactions often involve alcohol (Hagman, 2016).

Alcohol Use Disorder Risk Factors

Globally, the prevalence of AUD is 5.1%, with regional variations: 3.7% in Africa, 8.2% in the Americas, 0.8% in the Eastern Mediterranean, 8.8% in Europe, 3.9% in Southeast Asia, and 4.7% in the Western Pacific (Griswold et al., 2018; WHO, 2018). Although Türkiye falls within the WHO European region, AUD prevalence differs. Variations in definitions used in population studies may explain these differences, as universal diagnostic criteria for AUD remain the same. Higher AUD prevalence in university surveys compared to general population surveys suggests that university students are at greater risk for AUD (López et al., 2019).

A family history of alcohol use is a known risk factor for AUD (Murphy et al., 2016). A 2018 study in Mexico found that students whose mothers or both parents consumed alcohol had a higher risk of AUD than those whose fathers consumed alcohol (Villegas-Pantoja et al., 2018). In a study by Çam et al., father's alcohol use increased the risk of AUD by 1.7 times, and mother's alcohol use raised the risk by 1.5 times in male students. However, in this study, mother's alcohol use was not a risk factor, but father's alcohol use increased the risk of AUD by 1.8 times.

In this study, alcohol use by close friends also increased the risk of AUD by 4.6 times. Another study found that alcohol use by close friends raised the risk of AUD by 2.5 times among university students (Çam et al., 2020). Peer alcohol use creates a social environment that normalizes drinking, where young people may feel pressure to drink to avoid exclusion, disapproval, or missing out on social interactions. Shared thoughts, behavior patterns, or risk factors among close friends likely contribute to the increased risk of developing AUD.

Limitations

This study is a powerful research that represents all students of all universities in Trabzon, unlike studies that are generally conducted by selecting a single faculty. The current users were determined by asking the question about alcohol use as 'Are you using alcohol?'. Those who have used alcohol before are not included. Results on AUD were compared with studies using the AUDIT scale in university students. There were difficulties in comparing the results of different studies due to the diversity

of the cut-off score, application and evaluation of the AUDIT scale used in the detection of AUD. The last two questions of AUDIT are influenced by past alcohol use. Although the diagnostic criteria for AUD are universal, definitions of AUD used in population studies differ (53). In the literature, there are various expressions in the terminology of alcohol-related disorders such as, "alcohol dependence," "harmful pattern of use of alcohol," where dependence is the more severe manifestation, "alcohol use disorder," "binge drinking," "excessive alcohol consumption," "risky alcohol consumption," "problematic alcohol use," "hazardous alcohol use." The difference in these definitions also made comparisons difficult. In addition, the cross-sectional design does not reveal cause and effect relationships. The data were collected from the students who attended the classes. Students completed the test by self-rating test. It is not known whether the students who are absent from the course have the characteristics that will affect the study results (such as absenteeism due to alcohol use or AUD, illness, being in treatment).

The prevalence of alcohol use and AUD among university students in Trabzon was higher than in general population studies but consistent with other university studies. Given that alcohol use among university students is higher than in the general population, tailored intervention programs should be developed for this group. Risk factors identified include living away from family, tobacco use, parental alcohol consumption, and alcohol use by close friends.

These results revealed that alcohol use should be combated in these universities. Within the scope of this struggle, peer interaction should be prioritised, student clubs should be established in universities and existing student clubs should be more active. In addition, the importance of family and family support in the pre-university period should not be ignored. In addition, the results showed that the prevalence of alcohol use increased in the later years of university education. In order to prevent this, in the first years of university education, first year courses that are aimed at preventing alcohol use or that include more comprehensive topics (health and social effects of alcohol use, methods of coping with the problems experienced in the first years of university, resources where students can receive priority health services after the health problem experienced and access to these resources, etc.) can be added to the curriculum. In universities, rectorate-based centres that provide special health services to faculties and colleges can be established, and cooperation can be made with existing centres. Centres supported by psychiatrists and psychologists, which can recognise risk groups and direct them to activities should be established. In these centres, students should be given priority in health services.

Data Availability Statement: The data that support the findings of this study are available on request from the corresponding author.

Ethics Committee Approval: This study was approved by Ethics Committee of Karadeniz Technical University (Approval no.: 2021/372; Date: 28.06.2022).

Informed Consent: Written informed consent was obtained from the participants who agreed to take part in the study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – C.A.G., S.T.; Design – C.A.G., S.T., A.K.A., Y.E.B., N.E.B., M.T.; Supervision – S.T., N.E.B., M.T.; Resources – C.A.G., S.T., A.K.A., Y.E.B.; Materials – C.A.G., S.T., A.K.A., Y.E.B., N.E.B., M.T.; Data Collection and/or Processing – C.A.G., S.T., A.K.A., Y.E.B., N.E.B., M.T., A.K., S.C.B., N.K., G.N.S.; Analysis and/or Interpretation – C.A.G., S.T., A.K.A., Y.E.B., N.E.B., M.T.; Literature Search – C.A.G., S.T., A.K.A., Y.E.B., N.E.B., M.T., A.K., S.C.B., N.K., G.N.S.; Writing – C.A.G., S.T.; Critical Review – C.A.G., S.T., A.K.A., Y.E.B., N.E.B., M.T.

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