

PREVALENCE OF SUBSTANCE USE AMONG STUDENTS OF THE UNIVERSITY OF KERBALA

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Abstract: Background Substance use refers to the use of any psychoactive substances or drugs, which include tobacco, alcohol, illicit, and licit drugs, other than which are medically indicated. **Objective:** To identify the prevalence of substance, use among Students of the University of Kerbala and to identify specific factors that may be associated with substance use in students of the University of Kerbala. **Methodology** Between March 1st and May 7, 2019, we conducted a cross-sectional study at the University of Kerbala. We obtained official approval, clarified the study's objectives to students who were present in that class before distributing questionnaires, and guaranteed that no one would ask for their names. This meant ensuring that nobody asked for names so no one was asked for name details unprotected, i.e., adequately protected by confidentiality agreements; thus, their identities remained unknown; therefore, none of their names was sought after; hence nobody's name was warranted during this exercise or ever collected at all times including while taking this survey since each participant had different needs for privacy's sake." **Result** This research showed that the most used substance by students was cigarettes; 23% of students had used tobacco in the last 12 months, and the study revealed that alcohol consumption was 4.2% among students. Self-reported rates of lifetime illicit drugs was 3.1%, and lifetime licit drug use was 6.3%. **Conclusion** Smoking use are increasing in Kerbala and is the most prevalent of substance use among students at the University of Kerbala; alcohol use is present among students but not in addictive patterns; drug use is also present in limited numbers; rate of current and lifetime substance use in female is very low.

Key words: Substance; Students; Psychoactive chemicals; and World Health Organization (WHO).

Introduction

Substance use encompasses the consumption of psychoactive chemicals or drugs, such as tobacco, alcohol, illicit drugs, and legal pharmaceuticals that are not medically necessary. The use of these substances poses a significant risk to the well-being and societal structure of families, communities, and nations. This behavior has negative consequences not only on health, education, and career, but it also imposes a significant economic and social burden on society. (1) These substances can be legal (such as alcohol and tobacco), illegal (such as heroin and cocaine), or regulated for medical use by licensed professionals, like hydrocodone or oxycodone (such as Oxycontin or Vicodin). The substances discussed here have three common characteristics that make them significant to public health and safety. Firstly, all of these substances are extensively utilized and frequently abused. Secondly, the consumption of any of these substances in excessive amounts or in unsuitable circumstances might

lead to an instant or gradual health or societal issue. This behavior is referred to as substance misuse and can lead to severe, long-lasting, and expensive outcomes, such as being arrested for driving while under the influence of substances, experiencing sexual violence, engaging in child abuse and neglect, attempting or committing suicide, suffering a stroke, or experiencing an overdose. (3) All substances share the characteristic that prolonged and repeated use at high doses and/or frequencies can result in not only the aforementioned problems but also a distinct and diagnosable illness that significantly impairs health and function, often necessitating specialized treatment. (2) Substance use problems can lead to addiction (4), which encompasses a range of behavioral, cognitive, and physiological phenomena that develop after repeated substance use. These phenomena typically include a strong desire to use the substance, difficulties in controlling its use, continued use despite harmful consequences, prioritizing drug use over other activities and responsibilities, increased tolerance, and occasionally experiencing physical withdrawal symptoms. Statistics the document referred to as the "World Health Organization (WHO) (1948) Constitution" was published in Geneva in 1948. The source of this information is the World Health Organization (WHO) in the year 2017. In the country of Iraq, the issue has been increasingly problematic, particularly since 2003, as Iraqis have been subjected to extensive bloodshed and warfare over the past six decades, leading to an increase in accessibility. The introduction of narcotics has seen a rise in trafficking through Iraq, particularly from neighboring countries such as Afghanistan and Iran, where substance use disorder is prevalent (5). Based on the Iraqi Mental Health Survey conducted by the World Health Organization, substance use disorders ranked as the fourth most prevalent psychiatric disorder and the second most severe, following bipolar disorder.

Material and method

Study Design and Time Frame

This is a cross-sectional study which was conducted for the period from 1st March to 7 May 2019. The participants were university students from seven colleges were randomly selected from Karbala University (medicine, dentistry, pharmacy, engineering, Economics and administration, physical education, applied medical science)

Ethical consideration

The scientific committee of family medicine in the Arab board committee in Baghdad approved the protocol of the study. Approval for this study was obtained from the Research and Ethical Clearance Committee of Karbala University. The consent form was obtained from all participants before involving them in the survey.

Study tool:

The questionnaire were developed based on the previous research (34) (U.S. Department of State/Bureau of International Narcotics and Law Enforcement Affairs, 2015) and comprised a mix of open-ended and multiple-choice questions. It is a two-part questionnaire.

1-Sociodemographic and personal information: was used to obtain information like age, gender, the college and year, residence, economic status of students

2nd part includes questions on substance use (lifetime use of the substance, last 12 months of use of the substance, know someone who uses substance) as shown later.

Pilot study

A pilot study has been conducted in the College of dentistry of the University of Kerbala. It was done on 20 students to assess the feasibility of the questionnaire and to overcome any difficulties or related issues that may arise during data collection. This was done

1_ To find any difficulty for students to understand any question and reveal any modification needed for it.

2_ To estimate the time needed to complete self-administered by students and from the feedback, we adjusted some questions and neglected others

Sample size calculation

The total number of students of the University of Kerbala in the Morning Studies for the academic year 2018-2019 is 15434 students. We assume a sample of 400 students or more with not less than 200 male and 200 female students. We expect a credible level of non-response and incomplete answers, as it's substance use is a sensitive issue. So, 600 questionnaire forms were distributed on students to overcome that. However, the response rate was good at 86.8%, as 521 forms were returned. Forty-seven questionnaire forms with incomplete or clearly faked answers were excluded. As a result, the total sample achieved was 474.

Data collection

Before distributing the questionnaires, you need to get official consent and explain the purpose of the study to all students present in the class. We also asked that students answer each question honestly and freely. There was an assurance of anonymity, so don't write your name anywhere on it, please. They were further informed that this was only meant for scientific research purposes. It took them between 10 and 20 minutes to fill out these questionnaires.

Statistical analysis

Collected data were entered into an Excel sheet and then transformed into the statistical package for the social science program (SPSS software version 21) for further analysis. Qualitative data were expressed as numbers (N) and percentages (%). The 95% confidence intervals (95% CI) of the percentages was calculated. Quantitative variables were expressed in range, mean, and standard deviation (SD). Chi-square test was used for the analysis of qualitative variables, while the student's t-test was used for the analysis of quantitative variables. A probability (P-value) of less than 0.05 was considered as statistically significant.

Results

Table 1 Socio-demographic characteristics and proportion of different colleges and stages of student.

Socio-demographic characteristics		Number (N) = 474	Percent %
Gender	Male	241	50.8
	Female	233	49.2
College	Administration	100	21.1
	Applied medical science	35	7.4
	Dentistry	46	9.7
	Engineering	60	12.7
	Medicine	60	12.7
	Pharmacy	94	19.8
	Physical education	79	16.7
Stage	1	22	4.6
	2	88	18.6
	3	165	34.8
	4	192	40.5
	5	7	1.5
Marital Status	Single	425	89.7
	Married	43	9.1
	Divorced	3	0.6
	Widow	3	0.6
Living	Kerbala	339	71.5
	Outside Kerbala	135	28.5
Student Residence	Yes	75	15.8
	No	399	84.2

Table 2 Tobacco use in students of the University of Karbala

		N	%	95% CI
Have you ever used tobacco yourself	Yes	152	32.1	27.6 - 36.1
	No	322	67.9	
During the last 12 months, have you used tobacco?	Yes	109	23.0	19.0 - 26.8

Table 3 Alcohol use in students of the University of Karbala

		N	%	95% CI
Do you personally know people who have had a drink of alcohol?	Yes	174	36.7	32.5 - 41.1
	No	300	63.3	
Have you ever had a drink of alcohol yourself?	Yes	33	7.0	4.9 - 9.3
	No	441	93.0	
During the last 12 months, have you had a drink of alcohol?	Yes	20	4.2	2.5 - 5.9
	No	454	95.8	

Table 4 Use of pain killer in Students of the University of Karbala

		N	%	95% CI
Do you personally know people who use painkillers?	Yes	45	9.5	6.9 - 12.5
	No	429	90.5	
Have you ever used painkillers yourself?	Yes	6	1.3	0.4 - 2.3
	No	468	98.7	
During the last 12 months, have you used painkillers?	Yes	3	0.6	0.0 - 1.5
	No	471	97.9	

Table 5 Have you ever used drugs or substances in a student of the University of Karbala?

		N	%	95% CI
Have you ever used any drug/ substance	Yes	35	7.4	5.1 - 9.7
	No	439	92.6	
During the last 12 months, have you used any of the drugs/substances?	Yes	18	3.8	2.1 - 5.5
	No	456	96.2	

Table 6 The correlation between age and substance use

Age in years		N	Mean	SD	P value
Use of tobacco in the last 12 months	Yes	109	22.43	1.93	0.001
	No	365	21.78	1.73	
During the last 12 months, have you had a drink of alcohol?	Yes	20	22.55	2.46	0.113
	No	454	21.90	1.76	
Use any drug in the last 12 months	Yes	18	21.78	1.70	0.717
	No	456	21.93	1.80	

Table 7 The relation of tobacco with socio-demographic information

		During the last 12 months, have you used tobacco?			P value
		Yes N %	No N %	Total N %	
Gender	Male	96 39.8%	145 60.2%	241 100.0%	< 0.001
	Female	13 5.6%	220 94.4%	233 100.0%	
College	Administration	20 20.0%	80 80.0%	100 100.0%	< 0.001
	Applied science	5 14.3%	30 85.7%	35 100.0%	

	Dentistry	12 26.1%	34 73.9%	46 100.0%	
	Engineering	23 38.3%	37 61.7%	60 100.0%	
	Medicine	6 10.0%	54 90.0%	60 100.0%	
	Pharmacy	14 14.9%	80 85.1%	94 100.0%	
	Physical education	29 36.7%	50 63.3%	79 100.0%	
Stage	1st	4 18.2%	18 81.8%	22 100.0%	0.322
	2nd	25 28.4%	63 71.6%	88 100.0%	
	3rd	41 24.8%	124 75.2%	165 100.0%	
	4th	36 18.8%	156 81.3%	192 100.0%	
	5th	3 42.9%	4 57.1%	7 100.0%	
Marital status	Single	91 21.4%	334 78.6%	425 100.0%	0.039
	Married	15 34.9%	28 65.1%	43 100.0%	
	Divorced\ Widow	3 50.0%	3 50.0%	6 100.0%	
Living	Kerbala	68 20.1%	271 79.9%	339 100.0%	0.016
	Outside Kerbala	41 30.4%	94 69.6%	135 100.0%	
Student Residence	Yes	23 30.7%	52 69.3%	75 100.0%	0.087
	No	86 21.6%	313 78.4%	399 100.0%	
Total		109 23.0%	365 77.0%	474 100.0%	

Discussion

This study revealed that the substance most frequently used by students was cigarettes. Specifically, 109 students (23%) reported smoking cigarettes during the past 12 months, which aligns with the findings of the Iraqi National Household Survey of Alcohol and Drug Use (INHSADU) conducted in 2015, where the prevalence of cigarette smoking was also reported as 23.3%. These findings are consistent with other studies as well (35,36). However, the current percentage is higher compared to earlier studies conducted at Karbala University. Al-Ghaban's study in 2009 reported a percentage of 19.4%, while Almusawi's study in 2005 reported a percentage of 10.5% (37,16). The disparity between these and our outcome may vary. The fact that youth in Iraq are still reporting exposure to pro-smoking environments at a young age suggests that there is currently no effective strategy in place to manage and reduce tobacco smoking, as well as the prevalence of nargilla and coffee shops. There are around 400 coffee shops in Kerbala, which increases the likelihood of developing a smoking habit in the future. The present study revealed that the prevalence of smoking among Iraqi students is comparatively high, surpassing that of other Middle Eastern countries such as Iran (2014) [6], United Arab Emirates (2007) [6], and Saudi Arabia (2012) [8], where the prevalence of any current tobacco use was 19.3%, 15.8%, and 16.8% respectively.

Additionally, the tobacco usage of Iraqi adolescents (16) was found to be linked to the smoking habits of their siblings, close friends, and family members. The current study revealed that the prevalence of tobacco usage among male students was 39.8%, a significantly greater rate compared to girls (5.6%). This study is in line with earlier studies conducted in Karbala (37, 16), similarly to the Iraqi national survey (9).

The prevalence of smoking among women of the present study was still relatively lower than in many European-American studies (28-39%) in Latin American countries.

(15%) and some Middle east country like Iran (42,43). A study on students in Tehran by Khami et al. Showed that the smoking rate was 23 percent (32.7 and 14.6% in men and women, respectively) among students. Where culture plays an important role in female behaviors and habits, the largest rate of smoking was for the faculty of engineering (38.3%), physical education college (36.7%), followed by density (26.1%), economic and administration (20.0%) and pharmacy (14.9%) the least smoking rate was for applied science (14.3%) and medicine (10.0%) this is maybe to most students of physical education and engineering college are males, while the medicine school and applied science most of them are females. The significant difference in smoking prevalence among the students who attended different faculties is in agreement with the finding of DeAndrade A.P et al. (2009), although the

faculties were different. (10) The least smoking rate was from the first stage (18.2%), which may be due to the students still not really engaged with the university environment and have a little bit of excitement to try something new. The smoking rate is higher in widow and divorced students than single students it may be due to they suffer from psychological trauma, and it is higher in students wholiving outside Kerbala (30.4%) from students who live inside Karbala (20.1%), also students wholiving in students residence (30.7%) higher than who live in their parent's house (21.6%), the reason may be they influenced by their peers and lack of direct supervision from their parents The current study revealed that alcohol consumption was prevalent among (4.2%) of students.

That was lower in comparison to that of the research conducted in Baghdad in 2016. The investigation involved 1435 university students picked out haphazardly from three colleges, namely Baghdad, Al-Mustansiriyah, and Al-Nahrain, with only 9.7% admitting to consuming alcohol. (11) On the contrary, a report on alcohol drinking among 135 Muslim pupils who hail from 119 institutions in America disclosed that 46.2% indulged in this behavior (11). In contrast, alcohol consumption rates are notably lower among Middle Eastern nations, as demonstrated by a survey involving 1992 medical students in Iran, which found drinking habits among 6.9% of them (12). Another study done by Reza Hosseini et al. for instance, showed that there were proportions as low as 5.7% out of 604 Shahid Beheshti University students who were ever drunk (12).

This is means even for Muslim people, when living in a country that allows alcohol to be consumed, the proportion of users will rise, a sign of social norms that affect a person's behavior more than religion. A previous study from Kurdistan/ Iraq revealed that 20.8% of Hawler Medical College students in Erbil were alcohol use [13]. While another study that was carried out among 2298 students from Karbala University/ Iraq and found that only 2% were drinking alcohol (16). Experts believe that religious restrictions, as well as societal expectations, play a role in creating such disparities, which occur between regions of the same nation. In a given area such as Kurdistan, a lot of shops sold alcoholic beverages. Results from a recent search indicate that most students who take alcohol just do so once in a while. There was none among them that could be termed a habitual drunkard. This is similar to what it is reported in other studies. For instance, one done in Kurdistan/Iraq it noted thatmost students drank occasionally (13). Another study conducted in Karbala, Iraq, demonstrated that themost common type of alcohol consumed by students was sometimes or moderately; however, none of the females reported using any form of alcohol whatsoever (16). An examination made on Iranian students revealed that the most frequent form of alcohol intake was said to be occasional (11). But, the prevalence of drinkers who drink occasionally were reported as being widespread in surveys conducted in Ireland (14) or in the United Kingdom (15).

The main causes of these differences were the dissimilarity in the total number of alcohol drinkers' religious and social customs. In comparison to women, men have been reported to show significantly higher rates of alcohol consumption, especially among residents of Iraq, Lebanon or Iran [12], [15].

‘The results came as no surprise as there are always religious beliefs and attitudes towards drinking in general that may vary among Muslims and Christians when it comes to students’ answers concerning whether they drank alcohol with the opposite sex.’ This was a different story with American Muslim students since there was no significant difference observed between the sexes of the students. This can be attributed to their upbringing in an urbanised society where they try to adapt themselves to new conditions.

Conclusion

- Smoking use are increasing in Kerbala University students and is the most prevalent of substance use among students at Karbala University.
- Alcohol use is present among students but not in addictive patren; drug use is also present in limited numbers.
- The rate of current and lifetime substance use in females is very low relatively to males.
- Captagon is the most widely used illicit drug and benzodiazepine for licit drugs.

References

1. McLellan AT. Substance Misuse and Substance Use Disorders: Why do they Matter in Healthcare? Vol. 128, Transactions of the American Clinical and Climatological Association. 2017. p. 112–30. (n.d.).
2. Center for Behavioral Health Statistics and Quality. Results from the 2015 National Survey on Drug Use and Health: Detailed tables. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2016. (n.d.).
3. National Institute on Alcohol Abuse and Alcoholism. Rethinking drinking. Available at: <http://rethinkingdrinking.niaaa.nih.gov/Howmuch-is-too-much/Is-your-drinking-pattern-risky/Whats-Low-RiskDrinking.aspx>. Accessed 1 October 2019. (n.d.).
4. Substance Use | HealthLink BC 2018. Available from: <https://www.healthlinkbc.ca/substance-use/> last update October 17, 2018, substance abuse Accessed at 15 June 2019. (n.d.).
5. Hasnawi, S. A., Hemyary, N. Al, & Lafta, M. R. (2007). Public Attitudes toward Substance Abuse. *Karbala Med J.* Vol.1, No.2, 1 (2), 162–166.9. (n.d.). Taheri, E., et al., Cigarette smoking behavior and the related factors among the students of Mashhad University of Medical Sciences in Iran. *Iranian Red Crescent Medical Journal*, 2014. 17 (1): p. e16769-e16769. (n.d.).
6. Mandil A. Characteristics and Risk factors of tobacco consumption - Sharjah University students. 2007. (n.d.).
7. Mahfouz, M.S., et al., Tobacco use among university students of Jazan region: gender differences and associated factors. *BioMed research international*, 2014. 2014. (n.d.).
8. Enforcement, U.S.D.o.S.B.o.I.N.a.L., Survey of Substance Abuse in Iraq. 2015. (n.d.).
9. Andrade, A.P.A.d., et al., Prevalence and characteristics of smoking among youth attending the University of Brasília in Brazil. *Jornal Brasileiro de Pneumologia*, 2006. 32 (1): p. 23-28. (n.d.)
10. Al-Ameri, R., H. Al-Badri, and R.K. Lafta, Prevalence of alcohol consumption among university students in Baghdad: A cross-section survey from Iraq. *Epidemiology Biostatistics and Public Health*, 2016. 13:p. e11942-1. (n.d.).
11. Abbasi-Ghahramanloo, A., et al., Prescription drugs, alcohol, and illicit substance use and their correlations among medical sciences students in Iran. *International Journal of high-risk behaviors & addiction*, 2015. 4 (1). (n.d.).
12. Reza Hosseini, O., et al., Drug abuse among university students of Rafsanjan, Iran. *Iranian journal of psychiatry and behavioral sciences*, 2014. 8 (2): p. 81. (n.d.).
13. Sabir, J.M. and S.K. Ali, Prevalence of Alcohol Use among Medical College Students in Hawler Medical University. *Zanco Journal of Medical Sciences*, 2009. 13 (1): p. 17-23. (n.d.).
14. Davoren, M.P., et al., Hazardous alcohol consumption among university students in Ireland: a cross-sectional study. *BMJ Open*, 2015, 5 (1): p. e006045. (n.d.).
15. Heather, N., et al., Alcohol use disorders and hazardous drinking among undergraduates at English universities. *Alcohol*, 2011. 46 (3): p. 270-7. (n.d.).
16. Ghandour, L.A., et al., Factors associated with alcohol and/or drug use at sexual debut among sexually active university students: cross-sectional findings from Lebanon. *BMC Public Health*, 2014. 14 (1): p. 671. (n.d.).