

Prevalence Of Psychoactive Substance Use Among Students In Aswan University

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ABSTRACT

Background: Substance abuse among youth is a worldwide epidemic that can have a negative impact on health, family, society, and educational and professional life. University students make the transition from the restricted life monitored by parents to a more self directed life influenced by the university environment. Hence, the risk of substance use is increased in university environments. This study aimed to assess the prevalence of psychoactive substance use among students in Aswan University. **Methods:** This was a cross-sectional study conducted from 2019 to 2021 . on 1440 students were selected from different collages aged > 19 years old. Data were collected using by Substance misuse questionnaire of Egypt in an Arabic version and socioeconomic status scale.

Results: The study showed males 1035 (71.9%) while females 405 (28.1%), males represented the majority (80%) of psychoactive substance users. Tobacco and cannabinoids such as hashish are the most commonly used substances by (60.8% and 17.59%) respectively, followed by poly drug use (10.55%) and pills (9.5%), while alcohol came at last (1.5%). The main causes of using psychoactive substance mentioned by users were; the curiosity (52.76%), family problems (27.14%) and insomnia (20.1%).

Conclusion: Smoking cigarettes and using hashish were the most common practices and pills as Tramadol was the psychoactive substances of choice reported by them.

Keywords: Psychoactive, Substance abuse , University students

INTRODUCTION

Psychoactive substance is a drug or other substance that affects how the brain works and causes changes in mood, awareness, thoughts, feelings, or behavior. Examples of psychoactive substances include alcohol, caffeine, nicotine, marijuana, and certain pain medicines. Many illegal drugs, such as heroin, LSD, cocaine, and amphetamines . Also called psychotropic substance.. “Psychoactive” does not necessarily imply dependence-producing, the term is often

left unstated, as in “drug use”, “substance use” or “substance abuse”(Meyer, 2016).

A national survey performed over 106,480 Egyptian subjects between 20 and 45 years from different regions found that 13.3% used the substance at least once in their lives (Hamdi et al., 2016). Furthermore, in 2012, WHO stated that 6% to 8% of the Egyptians consumed cannabis. The pattern of substance-related problems was tremendously increasing especially after Arab Spring, 2011 (Viney, 2017)

Globally, it was estimated that a total of 246 million people, or 1 out of 20 people between the ages of 15 and 64 years, had used an illicit drug in 2013. The magnitude of the world drug problem becomes more apparent when considering that more than 1 out of 10 drug users is a problem drug user, suffering from drug use disorders or drug dependence (United Nations Office on Crime, 2015).

University students make the transition from the restricted life monitored by parents to a more self-directed life influenced by the university environment (Olley, 2008). Hence, the risk of substance use is increased in university environments (Makanjuola et al., 2014)

This research is intended to assess the prevalence of psychoactive substance use among students in Aswan university.

METHODS

This study enrolled 1440 students from different collages through a process of randomized sampling, participated collage are faculty of medicine, faculty of arts, faculty of science, faculty of education, faculty of physical education and faculty of law. Male represent 71.9% of our participants. The study protocol was approved by ethical committee, Faculty of medicine, Aswan university, Egypt. The methodological process was approved by the head of Aswan university.

The study used a cross-sectional descriptive survey design involving the administration of Substance misuse questionnaire of Egypt in an Arabic version (Hamdi et al., 2013), this

questionnaire was developed and standardized by Hamdi et al., (2013) and it has been used in the research done by the national center for social and criminological research for the detection of substance use among university students and workers. Drug abuse screening test (DAST 20) a 20 items instrument, self reported questionnaire, it is formed of 20 yes or no questions. Modified Arabic version of socioeconomic scale for family (Abd El-tawab, 2010) this questionnaire was developed and standardized by (Abd El-tawab. 2010) to determine the socioeconomic status for the students either high, moderate or low level.

The test composed of four parts:

- First part (8 items): educational level of parents.
- Second part (2 items): occupational state of parents.
- Third part (6 items): about monthly income of the family.
- Fourth part (3 items): about life style and cultural level of the family.

Statistical analysis

The collected data were computed and analyzed using the statistical analysis of data done by using excel program and SPSS program (statistical package for social science) version 16. Chi-square test was used to compare significance of qualitative variable (number and percentage).

RESULTS

Table (1): Prevalence of substance use among the studied sample (n=1440)

Cases	N	%
Positive cases	199	13.8
Negative cases	1241	86.2
Total sample	1440	100

Table (1) showed mostly negative cases (86.2%) regarding Prevalence of substance use among the studied sample.

Table (2): Socio-demographic data of the studied sample

Variables	Total sample No=1440	Positive cases No= 199	% of positive to total sample	Negative cases No=1241	% of negative to total sample	P value
<u>age group</u>						
16-19 yrs.	690 (47.9%)	84 (42.2%)	12.2%	606(48.8%)	87.8%	N.S
>19 yrs.	750 (52.1%)	115 (57.8%)	15.3%	635(51.2%)	84.7%	
<u>Gender</u>						
Female	405 (28.1%)	39 (19.6%)	9.6%	366(29.5%)	90.4%	0.000
Male	1035 (71.9%)	160 (80.4%)	15.5%	875(70.5%)	84.5%	
<u>Religion</u>						
Muslims	1330	173 (86.9%)	13%	1157(93.2%)	87%	0.000
Christian	(92.4%) 110 (7.6%)	26 (13.1%)	23.6%	84(6.8%)	76.4%	
<u>Origin of family</u>						
Rural	776 (53.9%)	104 (52.3%)	13.4%	672(54.1%)	86.6%	N.S
Urban	664 (46.1%)	95 (47.7%)	14.3%	569(45.9%)	85.7%	
<u>Residence</u>						
Rural	603(41.9%)	86(43.3%)	14.3%	517(41.7%)	85.7%	0.000
Urban	837(58.1%)	113(56.7%)	13.5%	724(58.3%)	86.5%	
<u>Living with</u>						
Alone	47(3.3%)	0	0	47(3.8%)	100%	0.000
Nuclear family	1008(70%)	103(51.7%)	10.2%	905(72.9%)	89.8%	
Extended family	385(26.7%)	96(48.35%)	24.9%	289(23.3%)	75.1%	
<u>Socioecono mic status</u>						
High	313(21.74%)	44(22.1%)	14.1%	269(21.7%)	85.9%	0.000
Moderate	939(65.21%)	129(64.8%)	13.7%	810(65.3%)	86.3%	
Low	188(13.04%)	26(13.1%)	13.8%	162(13%)	86.2%	

Table (2) regarding descriptive data of demographic characteristics in studied sample the prevalence of substance use disorders in the

age group more than 19 years old was (57.8%) and in age group (16-19) years old was (42.2%). According to gender, males reported higher

prevalence of substance use disorder (80.4%) more than females (19.6%) that was statistically significant ($P= 0.000$). Muslims are more affected (86.9%) than Christian (13.1%) . according to residence, students from urban areas reported higher prevalence (56.7%) than students from rural areas (43.3%) . Regarding current situation, students raised in nuclear

families reported higher prevalence (51.7%) than those of extended families . Regarding socioeconomic status substance use was highly prevalent in students with moderate socioeconomic status (64.8%) , and less prevalent with high socioeconomic status (22.1%), and with low socioeconomic status (13.1%) that was statistically significant.

Table (3): Prevalence of different drugs among substance users

<u>Types of drugs used:</u>	N=199	
Nicotine	121(60.8%)	0.000
Nicotine + Alcohol	3(1.5%)	
Nicotine + Pills	19(9.5%)	
Nicotine + Hashish	35(17.6%)	
Nicotine + Poly drug	21(10.6%)	

Table (3) showed that nicotine was the most common substance used (60.8%) followed by

hashish (17.59%), pills (9.5%), alcohol (1.5%), while poly drug use was (10.55%).

Table (4): Places of taking drugs, with whom taking , causes of starting drugs and source of drugs.

Variables	No= 199	P value
<u>Places of taking drugs:</u>		
Home	26(13.1%)	0.000
Friend home	118(59.3%)	
Café	55(27.6%)	
<u>With whom taking drugs:</u>		
Alone	74(37.2%)	0.000
Friends	125(62.8%)	
<u>Causes of starting drugs:</u>		
Curiosity	105(52.8%)	0.000
Insomnia	40(20.1%)	
Familial problems	54(27.1%)	
<u>Source of drugs</u>		
Friend	75(37.7%)	N.S
Dealer	97(48.7%)	
Pharmacy	27(13.6%)	

Table (4) show that most of substance users taking drugs with their friends (59.1%) and

(27.6%) use drugs in café .(62%) of substance users use drugs with their friends and (372%)

use drugs alone. About causes of starting drugs (52.8%) start taking drugs as type of curiosity .(27.1%) start drugs to escape from familial

problems and(20.1%) was suffering from insomnia and use drugs as atrial of self medication .

Table (5): Trials and causes of stoppage and relapses

Variables	No= 199	P value
<u>Trial of stoppage:</u> Stop and recurrence Never stop Stop without recurrence	123(61.8%) 26(13.1%) 50(25.1%)	0.000
<u>Causes of stoppage:</u> Worry about health Familial causes Religious causes	74(42.8%) 54(31.2%) 45(26%)	N.S
<u>for Ask help:</u> Yes No	103(59.5%) 70(40.5%)	N.S
<u>Who Ask for help?</u> GP Psychiatrist Man of religion Family member	No=103 6(5.8%) 4(3.9%) 27(26.2%) 66(64.1%)	0.000
<u>Relapse</u> One relapse Two relapses More than two relapses	No=123 64(52.1%) 40(32.5%) 19(15.4%)	N.S
<u>Causes of relapse</u> Maintaining factors of substance use Continuation in place of substance use No motivation for treatment Ineffective treatment No follow up	54(43.9%) 20(16.3%) 28(22.7%) 15(12.2%) 6(4.9%)	N.S

Table (5) show that (61.8%) stopped drugs and returned , (25%) stopped without recurrence and (13.1%) never stopped .The most common causes of stoppage was worry about health (42.8%) , familial causes (31.2%) and religions (26%) . (59.5%) of subjects who stopped asked for help from family members (64.1%) , religious men (26.2%) , GP (5.8%) and from psychiatrist (5.8%) , while (40.5%) did not ask

for help . (52.1%) of subjects who relapsed had one relapse , (32.5%) had two relapses and (15.4%) had more than two relapses . Most common causes of relapses was maintaining the same factors of substance use(43.9%) ,followed by loss of motivation for treatment (22.7%) , and presence in the same place encourage substance use .

DISCUSSION

Substance-related problems are considered one of the global persistent problems endangering humans of the various stage, social, geographical region, educational level, and nationality. Substance use is classified as the continual use of substances, illicit drugs, or the misappropriation of medicine or over-the-bench drugs with adverse outcomes.

University students, often experience undue amounts of stress, which can have negative academic, emotional and health outcomes (**Dahlin et al., 2005**). They face multiple stressors such as academic overload, constant pressure to succeed, competition with peers and in some countries financial burden as well as concerns about the future (**Vaez et al., 2006**). As all this may lead to psychopathology, the health of university students, especially healthcare students, has been the subject of increasing focus in recent years (**Alzahem et al., 2011**).

Male represent **71.9%** of our participants. Among our participants the prevalence of psychoactive substance was (**n=199:13.8%**);

Our finding was higher than other study done recently in Egypt as **Khafagy et al., (2021)** study among 1183 Egyptian university students, the prevalence of substance use was 6.5%, and **Meray et al., (2016)**, as the prevalence was 5% among a similar population in Egypt. However, higher value was found in other Egyptian study as Lifetime substance use among students is 22.5% regarding study by **Bassiony et al., (2018)**.

In other studies in other countries different prevalence among university students were reported, as in turkey study by **Bakar et al., (2013)** where the prevalence was 6.3%, in other study conducted by **Arora et al., (2016)** in India a prevalence rate was 24.2%, and The overall prevalence of psychoactive drugs used in **Shrestha et al., (2020)** study among the medical students of Kathmandu University School of Medical Sciences KUSMS in Nepal was found to be 76 (44.2%).

These cultural differences might affect the prevalence of and progression stages in

substance use. Moreover, some studies looked at the lifetime prevalence, whereas others looked at the current substance use among university students, which could add another explanation for these variations in the prevalence rate of substance use among studies.

In the current study males represented the majority (80%) of psychoactive substance users in our sample.

This finding is in line with the findings of a recent national study in Egypt, which demonstrated that 15.8% of males and 2.2% of females from various professions have used substances at least once in their lives (**Hamdy et al., 2016**).

This difference in prevalence rate of substance use among males and females, not reported only in our study but in many similar studies conducted in the past. (**Osman et al., 2016, Bassiony et al., 2018, Adhikari et al., 2019, Khafagy et al., 2021, Sapkota et al., 2021**).

This low prevalence of substance use among female individuals of Egyptian university students could be due to social stigma or other cultural barriers, which may cause them to deny substance use, or it could be due to the higher social tolerability of substance use among males.

There is no significant urban/rural difference in substance use levels in this study. This seems to be different with **Hamdi et al., 2013** stated that sample prevalence of substance use in urban areas (60.12%) higher than rural areas(36.43%).The relatively high rate of substance abuse in rural areas is probably due to the fact that these areas are transit points for drug trafficking and also wide spread of these substances in these areas may be contributing factors. Local cannabis production and the lifestyle of people with rural origins may explain the high rate of substance use detected in this group and also the sample distribution was higher in rural areas than in urban areas.

Among our substance user, tobacco and cannabinoids such as hashish are the most commonly used substances by (60.8%and 17.59%) respectively, followed by poly drug

use (10.55%) and pills (9.5%), while alcohol came at last (1.5%).

This is consistent with **Khafagy et al., (2021)** study that found 83.8% of substance users are smokers in the same line but with lower level **Loffredo et al., (2015)** reported (48%) of substance users were smokers. The high prevalence of smoking among substance users may refer to smoking as a predictor of substance use besides the easy accessibility and legalized use of smoking. In our study this could be explained as result of culture believes that smoking as sign of being adult and dependent and identification with their dominant figures.

As utilizing substances may begin before the stage of university studies, a large cohort study done in Egypt involved 10,648 secondary school students concluded that cigarette smoking was the highest, comprising 9% of substance users, 5.1% used benzodiazepines, 3.3 % used alcohol, 3.1% used organic solvents, and 2.6% used cannabis in the past 12 months (**Rabie et al., 2020**).

In the same line A study by **Ahmadi et al., (2001)** in Iran showed tobacco was the most commonly used substance as alcohol is forbidden in that region.

On other side Various substances used by the study participants regarding **Arora et al., (2016)** included alcohol (13%), cigarettes (10%), cannabis (smoking) (4.34%), bhang (3.48%), tobacco (chewing) (2.17%) and other substances (gel and drugs) (2.17%). Most of the abusers used more than one substance. Alcohol (41.86%) was the most commonly abused substance, followed by tobacco (13.95%) and then cannabis (9.88%) in **Shrestha et al., (2020)** study in Nepal. In comparison to the research shown by **Khanal et al., (2010)**, the result was mainly the use of alcohol, tobacco, and cannabis was 57.6%, 27.6%, and 12.8% respectively.

Hence, these differences in prevalence and pattern might be accounted to different socio-cultural scenarios.

Overall, cannabis and its derivatives were the most used substances among university students in Egypt, Arab countries (Kuwait and

Sudan) (**Osman et al., 2016; Bassiony et al., 2018**), and American and European populations (**Evans-Polce et al., 2016, Arias-De la Torre et al., 2019**). This can be explained by the recent trend of using new types of synthetic cannabis derivatives, as well as the ongoing debate over cannabis legalization (**Schilling et al., 2017**).

In the current study drug abusers preferred to take substances with their friends (62.8%) and the most common places of substance use was friend home (59.3%). It has been suggested that peers might serve as good role models for substance use intervention program (**Atwoli et al., 2011**).

Living with family and relatives is significantly associated with less substance use in survey (**Osman et al., 2016**). Many students at the university live with their families and many students of expatriate parents live with their relatives. This highlights the protective role of family and close relatives from negative peer influences. The importance of peer influence and its association with tobacco, alcohol, and cannabis was reported previously (**Adelekan et al., 1993, El-Amin et al., 2011**).

In the present study; the main causes of using psychoactive substance mentioned by users were; the curiosity (52.76%), family problems (27.14%) and insomnia (20.1%).

Other causes reported by different studies as (**Arora et al., 2016**) who found the most common reason reported in the for using such substances was relief from psychological stress (72.4%) and occasion celebration (72.4%) followed by to reduce tiredness (46.8%), peer pressure (42.6%), easy availability (42.6%), experimental use (36.2%) and community acceptance (34.1%).

Shrestha et al., (2020) reported that pleasure (31.7%) was one of the major causes of drug abuse experimentation (24.2%) being the second-most. The third major reason was frustration (13.3%). In the case of alcohol, peer pressure and social obligation were found to have a huge role.

Khanal et al., (2010) reported experimentation (42.3%), stress (19.5%), and

pleasure (15.4%) as principal causes for the abuse.

The result illustrates the consumption of smoking starts as a social obligation; once started with smoking, other drugs are consumed as of curiosity or pleasure or to ward off psychological stress. Friends and relatives seemed to discourage cannabis use. They have tried more in abstaining from cannabis use to a greater extent than tobacco and alcohol.

In this study, Dealers were the source of drugs in (48.7%) followed by friends in (37.7%), and then the pharmacy in (13.6%).

With regard to sources of substance use, several studies have indicated that the sources were mostly peers, family members, relatives, local grocery shops, and chemists (**Osman et al., 2016, Gebreslassie et al., 2013, Dada, 2012**)

Among our participants; 61.8% stopped psychoactive substance and return 25.1% stopped without recurrence and 13.1% never stopped, worry about health was the most common cause of stoppage (42.8%) then families (31.2%) and religions (26%). Two thirds of them asked for help; among them (64.1%) sought advice from family members, (26.2%) sought advice of religious men, (5.8%) asked help of general practitioners and (3.9%) asked help of psychiatrist.

Relapse was reported as (52.1%) had one relapse, (32.5%) relapsed two times, and (15.4%) relapsed more than (15.4%). The most common causes of relapse were the maintaining factors of substance use (43.9%) the absence of motivation for treatment (22.7%), while the least cause was lack of follow up (4.9%)

Among substances users in (**Arora et al., 2016**) (59.6%) made attempts to quit the use of concerned substance but had been unable to maintain abstinence. Also, 19 of 47 (40.4%) students said that they had experienced ill effects of substance use of which eight had physical complaints; five had problems with the family relationships and four had impaired academic performance.

CONCLUSION

Smoking cigarettes and using hashish were the most common practices and pills as Tramadol was the psychoactive substances of choice reported by them. The curiosity stood out as the most common reason to start and continue using substances, followed by adverse life events and having Insomnia; in the same line peer pressure from friends play a critical role as a source for them, site and as a partner. Strict parenting, religious influences, having non-user friends, and living in good neighborhoods were among the reasons perceived by youth as preventing them from using substances or helping them to quit substance use.

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