PDF version

Ibrahim Kabbash,[1] Omar Zidan[2] and Shimaa Saied[1]

[1]Department of Public Health and Community Medicine, Faculty of Medicine, University of Tanta, Tanta, Egypt (Correspondence to: I. Kabbash: Ibrahim.kabbaash@med.tanta.edu.eg). [2] Department of Public Health and Community Medicine, Faculty of Medicine, University of Al-Azhar, Damietta, Egypt

Abstract

Background: Drug abuse is a global challenge with harmful effects on health, wealth and wellbeing of nations. University students report more habitual use of marijuana, cocaine, hallucinogens and illicit drugs than noncollege students report.

Aims: To identify the prevalence of tobacco use, alcohol and drug abuse and to identify some factors associated with drug abuse.

Methods: A cross-sectional study recruiting 2552 students from all faculties hosted by Kafr El-Sheikh University during the academic year 2018–2019. Data were collected using a structured self-administered questionnaire.

Results: The prevalence of current drug abuse was 8.9% for cigarette smoking, followed by tranquilizers (4.3%), hashish (3.6%), alcohol (2.7%), bhang (1.4%) and tramadol (1.0%). Men reported significantly greater use of cigarettes, alcohol, tramadol, hashish and bhang than women. Students of practical colleges were found to smoke cigarettes and abuse hashish significantly more than their peers in other colleges. Risk factors associated with drug abuse were mainly related to gender and college type.

Conclusion: There is a need to design and implement programmes to raise awareness and provide supportive services for prevention and management of drug abuse among university

students tailored according to their needs.

Keywords: alcohol consumption, Egypt, hashish, smoking, substance abuse, tranquilizers, university students, adolescent

Citation: Kabbash I; Zidan O; Saied S. Substance use among university students in Egypt: prevalence and correlates. East Mediterr Health J. 2022;28(1):31-40. https://doi.org/10.26719/emhj.22.001
Received: 11/07/20; accepted: 06/12/20

Copyright © World Health Organization (WHO) 2022. Open Access. Some rights reserved. This work is available under the CC BY-NC-SA 3.0 IGO license (https://creativecommons.org/licenses/by-nc-sa/3.0/igo)

Introduction

Substance abuse refers to the detrimental or hazardous use of psychoactive substances, as well as alcohol and illicit drugs. Psychoactive substance use can lead to dependence syndrome, which is a group of behavioural, cognitive and physiological phenomena that arise after repetitive use. This incorporates: a strong desire to take the substance; trouble with controlling its use; continued use in spite of harmful consequences; a higher priority given to substance use than to other activities, in addition to obligations; increased tolerance to the substance; and sometimes a state of physical withdrawal (1).

Substance abuse is a global challenge with detrimental effects on health, livelihood and security of nations (2), and individuals' physical and mental health. It affects individuals' social status and responsibilities, and abusers usually suffer from different concurrent medical, psychological and social conditions (3).

Drug abuse by adolescents has become one of the main causes of health-related problems in several parts of the world, making some students to experience mental health problems, while some become maladjusted to school circumstances and finally drop out of school (4). Drug abusers who display symptoms of nervous tension, anxiety, depression, behavioural changes,

tiredness, and loss or increase in appetite should be treated by medical specialists and counsellors to save them from fatal illness (4).

Annually, ~5% of the world population (~200 million people) aged 15–64 years report using at least oneillicit drug. Marijuana is the most broadly used, with a prevalence of 3.8%, compared to 0.6% for amphetamines and opiates, 0.3% for cocaine and heroin and 0.2% for ecstasy (3). In 2011, the United States Monitoring the Future Survey revealed that 49% of college students had consumed an illicit drug at least once in their lifetime and 21% had done so in the last 30 days. The commonest drug was marijuana, reported by 47% of students through their lifetime and by 19% in the last month. Other popular drugs used by students in the last 30 days were amphetamines (4.5%), opioids (2.1%), cocaine (1.2%) and hallucinogens (1.2%) (5).

There is some evidence from American national surveys that university students are at greater risk of drug use than other young people of comparable age. The Core Alcohol and Drug Survey for 2011 demonstrated that college students reported more frequent use of marijuana, cocaine, hallucinogens and designer drugs in the last 30 days than noncollege students reported (5).

Tobacco and alcohol are the most commonly used drugs among South African adolescents despite the health and social problems associated with them. This may be because they are both legal and many consider them tolerable and mild. Cannabis is the most commonly used illicit drug among South African students; at least 12% have ever tried at least one illegal drug such as heroin, mandrax and cocaine (6). A national survey of drug use among university students in the United Kingdom of Great Britain and Northern Ireland in 2014 found that 20.7% of students and 16.9% of nonstudents reported using at least 1 drug in the last 12 months. The most commonly consumed drug was cannabis (19%), followed by mephedrone, ecstasy cocaine, and ketamine. The least commonly used drugs were heroin, methadone, crack, methamphetamine and steroids (all

A study among Egyptian university students in 2018 reported the lifetime prevalence of drug abuse as 22.5% (8). Multiple drug abuse is not uncommon. Among Mansoura University students in 2016, a study of 100 opioid-using students found that 88 reported tramadol use and 12 heroin use (9). Another study conducted at Zagazig University in 2018 reported alcohol and sedative abuse prevalence as 10.29% and 5.2%, respectively (10). Drug dependence is considered an important problem in Egypt that is of concern both to the community and government (11). Peer pressure and negative life events are mentioned as the most common reasons for substance abuse. Conversely, rigorous parenting and religiosity are among the factors perceived to prevent substance use or help with cessation (12). Different reports have indicated a progressive rise in drug abuse among Egyptian university students over time. However, only a limited number of published studies have demonstrated the magnitude of and

the factors affecting this problem. No studies were conducted among Kafr El-Sheikh university students in spite of their large number. This information gap motivated us to perform the present study to identify the prevalence and correlates of drug abuse among Kafr El-Sheikh university students. We also aimed to study gender differences in the magnitude of the problem and the consequences of the problem on the students.

Methods

Study design

A cross-sectional study was conducted for 3 months in the academic year 2018–2019. Kafr El-Sheikh University was founded in April 2006 and includes 19 faculties and 3 higher institutes. The total number of students is ~60 000. The sample size was calculated using Epi-Info software, version 2007, created by the World Health Organization and US Centers for Disease Prevention and Control. We estimated an assumed prevalence of 3% of drug abuse with an error bound of 1% (precision), at a confidence interval of 95% and a design effect of 2. The calculated sample size was found at N > 2194.

The survey included 13 faculties that were grouped into 3 strata: (1) medical faculties (medicine, dentistry, pharmacy, physical and veterinary medicine); (2) practical faculties (engineering, agricultural, education, physical education, and specific education); and (3) academic faculties (commerce, arts and languages). In practical and medical faculties, students were divided into groups for practical training. These groups were considered as clusters and ≥ 1 cluster was chosen according to weight of total enrolled students. In academic faculties, 1 day and 1 lecture hall were chosen randomly and all attending students in that lecture hall were included in the study sample. A total of 2500 questionnaires were distributed. At the end of data collection, we retrieved 2252 completed questionnaires, giving a response rate of 90%.

Study questionnaire

We used the questionnaire designed by the Fund for Drug Control and Treatment of Addiction, (FDCTA) Ministry of Solidarity, Egypt that was used in previous surveys. This questionnaire was validated and tested for reliability by FDCTA. A pilot study was conducted before starting data collection to test the adequacy and time needed to fill the designed questionnaire, and to determine the potential obstacles that might be met during execution of the study.

Data collection and analysis

Data were collected using a validated and reliable self-administered questionnaire that included items regarding the following data: sociodemographic factors; current and past history of smoking, alcohol intake and drug abuse; and problems related to drug abuse. The collected data were coded, double-checked for completeness, entered into Microsoft Excel, and analysed

using SPSS version 25.0. (SPSS Inc., Chicago, IL, USA). Means and standard deviations were calculated for continuous variables and frequencies for categorical variables. The c2 test was used to compare differences in the distribution of variables among suited groups. When χ2 was not appropriate due to the presence of > 20% of observations with expected values **Ethical considerations**

We obtained ethical approval from the faculty deans and the Internal Review Board of the university. Informed consent was obtained from the participants after explanation of the study purpose and benefits, and participation was voluntary. Participants' data confidentiality was guaranteed.

Results

The study included 2252 students from different faculties of Kafr El-Shiekh University, aged 17–25 years [mean 20.03 (1.3) years] (Supplementary Table 1). Students who ranked first among their siblings represented 36.2%; those ranked second represented 31.1% and those ranked fifth or more represented 5.1%. Students living with their parents represented 86.3% and those living alone were only 1.0%. Family size showed a mean of 5.39 (1.18), with the highest frequency for 5 (45.8%). For fathers' education, 31.9% had secondary school education and 39.5% were university graduates, compared with 39.7% and 31.4% for mothers' education. For fathers' job, the highest frequency was for professionals (38.3%) followed by private work (26.4%). For mothers' job, 71.5% were housewives.

Students who had ever smoked tobacco represented 16.4%, which was significantly higher among male (33.1%) compared to female (3.3%) students (Table 1). The most frequently abused drugs were tranquilizers (8.7%), which was significantly more frequent among female than male students (10.6% vs 6.5%). The second most frequently abused drug was alcohol (6.7%), which was significantly more frequent among male than female students (12.9% vs 1.0%). The third most frequently abused drug was hashish (6.6%), which was significantly more frequent among male than female students (13.5% vs 0.3%). The least frequently abused drugs included crack (0.2%), vodo (0.3%) and opioid analgesics (0.4%), with no significant differences between male and female students.

Table 2 shows the drugs that were abused in the last month. Tranquilizers ranked first (4.3%) followed by bhang (1.4%) and tramadol (1.0%). Injecting drugs were ever reported by 1.8% of students, and their abuse in the last 6 months and last month was significantly higher among male than female students.

Cigarette smoking was significantly more prevalent among students in practical faculties (10.6%) than among students in theoretical (9.9%) and medical (3.75%) faculties (Table 3). Hashish abuse was significantly more prevalent among students in practical faculties (4.4%) than among students in theoretical (4.0%) and medical (1.4%) faculties. Abuse of tranquilizers was more prevalent among students in theoretical faculties compared with other faculties, but the differences were not significant. Prevalence of abuse of other drugs did not differ significantly among students in different faculties.

Number of abused drugs was significantly associated with male sex (Table 4). Trying 1 drug was reported by 13.2% of male students compared to 6.2% of female students. Those who tried 2 drugs represented 4.5% of male students compared to only 0.2% of female students. The proportion of students who tried ≥ 3 drugs was 5% among male students but was not reported among female students. The number of drugs abused was significantly associated with smoking habit. Among smokers, 53.0% tried 1 drug, 22% tried 2 drugs and 25% tried ≥ 3 drugs. A significantly high percentage of medical students (91.4%) reported no drug abuse. The highest percentage of single drug abuse (10.7%) was reported by students in theoretical faculties, while the percentage who had tried ≥ 2 drugs was significantly higher among students in practical faculties (2.9%).

Among problems related to alcohol abuse, sex without a condom (3.0%) and unplanned sexual contact (2.9%) were the most frequent (Table 5). Among illicit drug abusers, about 1% reported quarrels and conflicts with parents.

Discussion

Drug abuse, especially among adolescents, is an important public health and social problem internationally and in Egypt. University students are at an increased risk of substances abuse.

Tobacco smoking is the most commonly reported substance used by Egyptian adolescents (13). In the present study, current (i.e. past 30 days) smoking prevalence was significantly higher among male than female students, which is lower than results reported among Zagazig University students, in whom the prevalence was 26.1% in male and 1.4% in female students (10). However, it was higher than the prevalence found among medical students in the Nile Delta, which was 10.8% and 0.54% of male and female participants, respectively. This lower prevalence among female students can be attributed to the shameful perception of smoking among women according to community norms in Egypt (15).

Tranquilizers ranked as the most frequently abused illicit drugs (ever and current abuse) by 8.7% of students. These results are higher than those reported among students at Zagazig University (10) and Sohag University (18), in whom the prevalence of abuse of sedative drugs was 5.2% and 4.2%, respectively. In contrast, Al-Sayed et al. reported higher prevalence (17.0%) of abuse of sedatives among medical students in King Saud University, Saudi Arabia (16).

Alcohol was the second most frequently ever-abused substance by our study participants (6.7%). This is in agreement with Loffredo et al., who found that alcohol was commonly abused by Egyptian adolescents (13). Similar results (6.5%) were reported in the Islamic Republic of Iran (19). A lower prevalence of alcohol abuse (4.2%) was reported among students at Sohag University (16), but a higher percentage (10.5%) was reported by Karam et al. (2007) among college students in different countries (17). These results also coincide with those of Hamdi et al., who reported that alcohol was the second most commonly abused substance in almost all Egyptian governorates, except Upper Egypt (where opiates were more common) (20).

The third most frequently ever-abused drug was hashish (6.6%). This is in line with Hamdi et al., who reported that cannabis was the most commonly abuse drug in all Egyptian regions (20). Mwaheb et al., in a study of male students in Faiyum City, reported that cannabis was the most commonly abused drug (40%) (21). This high percentage may have been because their study was conducted among male students only and included secondary schools and colleges. It could also be attributed to the fact that cannabis is common in Egypt with a lower price than other drugs.

The most frequent currently abused substance was bhang (1.4%), which was lower than the reported prevalence (2%) among medical students at Cairo University (22). Tramadol ranked second among the most frequent currently abused drugs among study participants. A lower prevalence (0.7%) was reported among secondary school students in Egypt (23), while a higher prevalence (1.8%) was found among Sohag University students (18).

In the current study, drug abuse was significantly associated with male students. This was also supported by a community-based study among Egyptians (20), which concluded that male gender was significantly positively correlated with substance abuse, which may be attributed to cultural and social contexts. Similarly, Meray et al. (18) reported a strong correlation between being male and drug abuse, as female drug abuse is socially unacceptable. Abuse of > 2 drugs was reported among 5% of male students, which is lower than that reported among Zagazig University students, among whom, 16% were multiple drug abusers (10).

Smoking carries a high risk of drug abuse, and our study revealed a significant association between smoking habit and the number of abused drugs. This was in agreement with the study of Amin et al. among Zagazig University students (10), who found that 56.1% of students who abused alcohol and 19.79% of those who abused sedative drugs were smokers, while only 3.8% and 3.25% of them, respectively, were nonsmokers. Similarly, Morrison et al. (24) and Huizink et al. (25) reported a mutual relationship between addiction and smoking and stated that smoking directly affects illegal drug abuse, as they found that addiction and stress were the primary and main reasons for starting and continuing to smoke.

In the current study, a significantly high percentage of medical students (91.4%) reported no drug abuse. This was consistent with the findings of Shalaby and Soliman (22), who reported a 9.1% frequency of substance abuse among medical students in Cairo University. This lower prevalence of drug abuse among medical students compared to students at other colleges may be attributed to their satisfactory level of awareness regarding health hazards of addiction owing to their curriculum.

The current study reveals a need for the development of interventions for substance abuse among university students and the increased attention of local authorities and families, in addition to implementing effective addiction counselling and prevention programmes to support university students.

This study is the first report of the problem of substance abuse in Kafr El-Shiekh University. The sample size was high and reflects well the magnitude of the problem. However, the study had some limitations. First, the self-reporting nature of the drug abuse allowed recall bias. Second, the stigma associated with drug abuse among university students might have led to under-reporting and underestimation of the prevalence.

Conclusions

This study highlighted the magnitude of drug abuse among Kafr El-Shiekh university students, the commonly abused drugs, and the factors associated with drug abuse, in addition to some consequent problems that result from it. The abused substances were mainly cigarettes, tranquilizers, alcohol and hashish. Students in academic and practical faculties are at higher risk than those in medical faculties. There are many risk factors for substance abuse but the main factors are age, sex, residence, parental educational level, and smoking habit.

Acknowledgement

We would like to express our appreciation to 4th year medical students participated shared in data collection. We appreciate the help offered by the Dean of the Faculty of Medicine and the Public Health & Community Medicine Department. Special thanks are due to Mohammad Abouzid, Professor of Public Health & Community Medicine, Faculty of Medicine, Tanta University, for his revision of this manuscript and valuable comments. Finally, we would like to thank all university students who participated in the study.

Funding: None

Competing interests: None declared.

Abus de substances psychoactives parmi les étudiants universitaires en Égypte : prévalence et corrélats

Résumé

Contexte : L'abus de drogues est un défi mondial qui a des effets néfastes sur la santé, la richesse et le bien-être des nations. Les étudiants universitaires déclarent consommer plus souvent de la marijuana, de la cocaïne, des hallucinogènes et des drogues illicites que les étudiants non universitaires.

Objectifs : Déterminer la prévalence de la consommation de tabac, d'alcool et de l'abus de drogues et cerner certains facteurs associés à ce dernier.

Méthodes : Une étude transversale a recruté 2552 étudiants de toutes les facultés à l'Université de Kafr El- Sheikh (Égypte) pendant l'année universitaire 2018-2019. Les données ont été recueillies au moyen d'auto-questionnaires structurés.

Résultats : La prévalence de l'abus de drogues au moment de l'étude était de 8,9 % pour le tabagisme par cigarettes, suivi par les tranquillisants (4,3 %), le haschisch (3,6 %), l'alcool (2,7 %), le bhang (1,4 %) et le tramadol (1,0 %). Les hommes ont déclaré une consommation de cigarettes, d'alcool, de tramadol, de haschisch et de bhang significativement plus élevée que

les femmes. Il a été constaté que les étudiants des facultés d'études pratiques fumaient des cigarettes et consommaient du haschisch beaucoup plus que leurs camarades des autres facultés. Les facteurs de risque associés à l'abus de drogues étaient principalement liés au genre et au type d'université.

Conclusion : Il est nécessaire de concevoir et de mettre en œuvre des programmes de sensibilisation et de fournir aux étudiants des services d'appui adaptés à leurs besoins en matière de prévention et de prise en charge de l'abus de drogues.

:

.

.

2552 .2018-2019 .

(6.7%) (8.7%) (2.4%) (3.0%) (6.6%) (3.6%) (4.3%) 8.9% (1.0%) (1.4%) (2.7%) .

[illegible]

References

1. Okpye, N.N. (2001). The adolescents and hard drugs: a psychological concern. In: Okonkwo RUN, Okoye RO, editors. The Nigerian adolescent in perspective. Nigerian Society for Education; 2001.
2. WHO Expert Committee on Dependence-Producing Drugs. Fourteenth report. Geneva: World Health Organization; 1965 (World Health Organization Technical Report Series No. 312; https://apps.who.int/iris/bitstream/handle/10665/39802/WHO_TRS_312.pdf?sequence=1, accessed 20 September 2021).
3. World drug report 2008. United Nations Office for Drug Control and Crime Prevention (https://www.unodc.org/unodc/en/data-and-analysis/WDR-2008.html, accessed 20 September 2021).
4. Fareo DO. Drug abuse among Nigerian adolescents strategies for counselling. J Int Soc Res. 2012 winter;5(20):341–7.
5. Johnston LD, O'Malley PM, Bachman JG, Schulenberg JE. Monitoring the future: national survey results on drug use: 1975–2011. Volume II: college students and adults ages 19–50. Ann Arbor, MI: Institute for Social Research; 2012.
6. Soul City Institute for Social Justice. A review of literature on drug and substance abuse amongst youth and young women in South Africa (https://www.soulcity.org.za/research/literature-reviews/soul-city-institute-drug-abuse-youth-south-africa.pdf/view, accessed 20 September 2021).
7. Bennett TH, Holloway KR. Drug use among college and university students: findings from a national survey. J Subst Use. 2014;20(1):50–5. https://doi.org/10.3109/14659891.2013.878762
8. Bassiony MM, Salah El-Deen G, Abdelghani M, Youssef UM, Hassa M, El-Gohari H. Addressing prevalence and correlates among a sample of Egyptian university students who suffer from substance use disorders. Addict Disord Their Treat. 2018 Sep;17(3):114–23. https://doi.org/10.1097/ADT.0000000000000131
9. Mahgoub R, El-Hadidy M, Abo El Hoda M, Atrouny M. A study of opioid dependence among Mansoura University students. Egyptian J Psych. 2016;37(3):174–9. https://doi.org/10.4103/1110-1105.195548
10. Amin DM, Elnagdi SA, Amer SA. Drug abuse in Zagazig University students, Egypt: cross sectional study, 2018. Occup Dis Environ Med. 2019;7(2):37.
11. El-Sawy H, Abdel Hay M, Badawy A. Gender differences in risks and pattern of drug abuse in Egypt. Egypt J Neurol Psychiat Neurosurg, 2010;47(1):413–8.
12. Alhyas L, Al Ozaibi N, Elarabi H, El-Kashef A, Wanigaratne S, Almarzouqi A et al.

Adolescents' perception of substance use and factors influencing its use: a qualitative study in Abu Dhabi. JRSM Open. 2015;6(2):2054270414567167. https://doi.org/10.1177/2054270414567167 PMID:25780594

13. Loffredo CA, Boulos DN, Saleh DAA, Jillson IA, Garas M, Loza N et al. Substance use by Egyptian youth: current patterns and potential avenues for prevention. Subst Use Misuse. 2015;50(5):609–18. https://doi.org/10.3109/10826084.2014.997391 PMID:25629955

14. Kabbash IA, Sarsik SM, Kabbash MI, Hagar AAR, Othman NM, Ismail MF et al. Perception and practices of tobacco smoking among medical students in the Nile Delta, Egypt. Environ Sci Pollut Res Int. 2018 Nov;25(31):30839–46. https://doi.org/10.1007/s11356-017-9443-1 PMID:28620859

15. Khalil J, Afifi R, Fouad FM, Hammal F, Jarallah Y, Mohamed M et al. Women and waterpipe tobacco smoking in the eastern Mediterranean region: allure or offensiveness. Women Health 2013;53(1):100–16. https://doi.org/10.1080/03630242.2012.753978 PMID:23421341

16. Al-Sayed AA, Al-Rashoudi AH, Al-Eisa AA, Addar AM, Al-Hargan AH, Al-Jerian AA et al. Sedative drug use among King Saud University medical students: a cross-sectional sampling study. Depress Res Treat. 2014: Article ID 378738. https://doi.org/10.1155/2014/378738

17. Karam E, Kypri K, Salamoun M. Alcohol use among college students: an international perspective. Curr Opin Psychiatry. 2007 May;20(3):213–21. https://doi.org/10.1097/YCO.0b013e3280fa836c PMID:17415072

18. Meray MS, Ahmed FH, Rania AR. Study of Drug Abuse among University Students in Sohag, Egypt. J Forens Toxicol Medicolegal Anal. 2016;1(2):19–23.

19. Goreishi A, Shajari Z. Substance abuse among students of Zanjan's Universities (Iran): a knot of Today's Society. Addiction & health 2013 Winter–Spring;5(1–2):66–72. PMID:24494160

20. Hamdi E, Sabry N, Sedrak A, Khowailed A, Loza N, Rabie M et al. Sociodemographic indicators for substance use and abuse in Egypt. J Addict Prevent. 2016;4(1):8. https://www.avensonline.org/fulltextarticles/JAP-2330-2178-04-0026.html

21. Mwaheb MA. Drug abuse among students in (schools and colleges) in Fayoum City [thesis]. Fayoum University; 2012.

22. Shalaby SF, Soliman MA. Knowledge, attitude, and practice of medical students regarding smoking and substance abuse, Cairo University, Egypt. J Egypt Public Health Assoc. 2019;94(1):11.

23. Rabie M, Shaker NM, Gaber E, El-Habiby M, Ismail D, El-Gaafray et al. Prevalence updates of substance use among Egyptian adolescents. Middle East Curr Psychiatry. 2020 27(1):4. https://doi.org/10.1186/s43045-019-0013-8

24. Morrison K, Banas J, Burke M. Understanding college students' salient attitudes and beliefs about smoking: distinctions between smokers, nonsmokers, and ex-smokers. Public Health Rev. 2003;31(2):95–109. PMID:15255159

25. Huizink AC, Levälahti E, Korhonen T, Dick DM, Pulkkinen L, Rose RJ et al. Tobacco, cannabis, and other illicit drug use among Finnish adolescent twins: causal relationship or correlated liabilities?. J Stud Alcohol Drugs. 2010 Jan;71(1):5–14. https://doi.org/10.15288/jsad.2010.71.5 PMID:20105408

Thursday 11th of July 2024 04:11:26 AM