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Knowledge, Attitude and Practices on Substance Use Disorders by University Students: A Review of Literature

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Abstract

Background: This is a systematic review of literature describing the knowledge of substance use disorders (SUDs) by university students and determines their attitude and practices towards SUDs. It compares university students in different countries.

Methods: The author conducted a systematic review of selected studies on SUDs conducted among university students and published between 2014 and 2017. An extensive search of literature was performed from 13th to 17th November, 2017 using Ovid interface to search MEDLINE, ScienceDirect, RESEARCH-Open Access for indexed journals in the subject area. The study author conducted this systematic review on the subject from journals availed online.

Results: Findings of nine articles were included in this review. The included articles assessed university students at various academic years and programmes. The SUDs included alcohol use disorder, nicotine dependence, legal, illegal drugs dependence and pharmaceutical drug dependence.

Conclusions: The findings from the reviewed studies indicate awareness by university students on substance use disorders. However, there is need for enhanced awareness and education programmes for university students on SUDs aimed at producing a positive impact on their practices, attitudes and knowledge on this subject.

Keywords: Substance use disorders; Drugs; University students

Abbreviations and Acronyms

AIDS: Acquired Immune Deficiency Syndrome; APA: American Psychiatric Association; ASAM: American Society for Addiction Medicine; ATS: Amphetamine-type stimulants; HIV: Human Immune-Suppression Virus; MDMA: Methylenedioxy-N-methylamphetamine; OUD: Opoid Use Disorder; SUDs: Substance Use Disorders; US: United States; UN: United Nations; UNODC: United Nations Office on Drugs and Crime; WHO: World Health Organization.

Introduction

Substance use refers to consumption of alcohol or psychoactive drugs not necessarily leading to addiction or dependence. Substance dependence refers to addiction causing tolerance and withdrawal symptoms; whereas substance abuse is daily or regular consumption of alcohol or drugs. Substance use disorder is the inability to have voluntary control over substance use resulting in poor health and social function. It is the use of intoxicating substances causing a clinically significant impairment. Substance use disorders can be subsumed into three categories in terms of severity: mild, moderate and severe [1,2].

Research findings show an alarming rate of substance use disorders among university students with the global prevalence of psychoactive substance use increasing. With the global upward trend of substance use disorders among college and university students, substance use is a critical area of research. This is due to the implications of development of substance dependence at an early age impacting negatively on the future of young people [3,4].

The years in college or university are characterized by transition, intense academic and peer pressure as well as the feeling of independence as a result of separation from parental supervision. Other predisposing factors include substance availability and internet, technology and media influence. During this period, opportunities to experiment with psychoactive substances are high. This predisposes students to SUDs.

Early initiation to substance use mostly during adolescence contributes to the increasing rates of substance use disorders. Students from developing countries are at a greater risk of developing SUDs due to lack of the necessary substance use disorders identification, treatment and control programmes within the institutions of higher learning. Most developing countries experience rapid economic, social, and cultural transitions creating favorable conditions for increased and socially disruptive substance use [5]. Emerging substances and use of prescription drugs have also been documented to be on the rise among university students [6].

A number of epidemiological studies have been conducted to determine the prevalence of substance use among university students in different countries. The risk factors for drug dependence differ among countries [7]. Degenhardt et al. pointed out a range of variables that are common to the development of illicit drug dependence among

users: early onset of drug use, using more types of illicit drugs, and onset of externalizing (e.g., conduct disorder) or internalizing mental disorders (e.g., depression) before the age of 15 years.

Substance dependence negatively impacts at individual, family and social and societal levels [8]. Substance use contributes to high psychosocial problems, morbidity and premature deaths among young people. Individuals who use drugs and alcohol experience an array of effects including tolerance, withdrawal, poor health, overdose, aging, and involvement in crime and unprotected sex. The infectious diseases that mostly affect drug users include Hepatitis C, Hepatitis B and AIDS [9]. The effects of substance dependence not only disrupt families but also create destructive patterns of codependency. The effect of substance dependence on society manifests itself through lost work time, inefficiency and a rise in crime [6].

Findings and Discussion

Knowledge, attitude and practices on substance use disorders among university students

Students perceive substance use as normal part of college life [10]. Substances mostly used by university students include alcohol, cigarettes and marijuana. Research indicates that students tend to consume more than one substance on a regular basis [11]. Students with a high family income and who are not religious are considered to be at higher risk for substance use and developing SUDs [12].

Lack of knowledge on the risks of substance use has contributed to the increasing cases of substance use disorders. Substance use has been attributed to lack of proper knowledge on the associated risks [13].

A review of nine selected studies carried out since 2014 to 2017 revealed the following findings (Tables 1 and 2).

The Atlas on Substance Use 2010 of the [14] World Health Organization [15], indicated the global prevalence rates of substance use disorders ranging from 0% to 3%, with the Eastern Mediterranean region having the highest prevalence rates. According to The United Nations Office on Drugs and Crime-World Drug Report 2012, Cannabis is the world's most widely used illicit substance, ranging from 2.6% to 5% of the adult population (119-224 million estimated users aged 15-64 years). Amphetamine-type stimulants (ATS) (excluding "ecstasy") second with an estimated prevalence of 0.3-1.2% (14.3-52.5 million users), and opioid (mainly heroin, morphine, and non-medical use of prescription opioids) placed third at 0.6-0.8% of the population aged 15-64 years (26.4-36 million opioid users).

No.	University	Country	Sample Size	Year of Publication
1.	Islamic Azad University	Iran	3449	2017
2.	Mekelle University	Ethiopia	200	2015
3.	Universities in ASEAN member states [14]	Cambodia Indonesia Laos Malaysia Myanmar; Philipines Singapore; Thailand Vietnam	7923	2017
4.	Bozok University	Turkey	572	2015
5.	Hebrew University in Jerusalem	Israel	75 Medical students	2014
6.	Eight Universities	Germany	4387	2017
7.	Mid-Atlantic Urban University	USA	124 Master of Social Work students	2017
8.	Private University in Khartoum State	Sudan	500	2016
9.	University of Venda	South Africa	332	2014

Table 1: Summary of universities reviewed.

No.	University	Students Knowledge on SUDs	Students Attitudes and Practices on SUDs
1.	Islamic Azad University	Had knowledge on factors of addiction and prevention methods of substance abuse (79.1% and 89.6%, respectively). Had knowledge on the harmful effects of substance abuse.	Reasons by male and female students for substance use, Prevention programs, Therapeutic programs and addiction were significantly different. A small number of the students reported using drugs to feel more adult, but most of them had tried to be more popular with peers 86.9%.
2.	Mekelle University	The respondents cited peer pressure 55%, academic factors 20%; psychological and social factors 15% as major causes of alcohol and drug abuse. 70% of the respondents had knowledge on the health consequences of substance use	

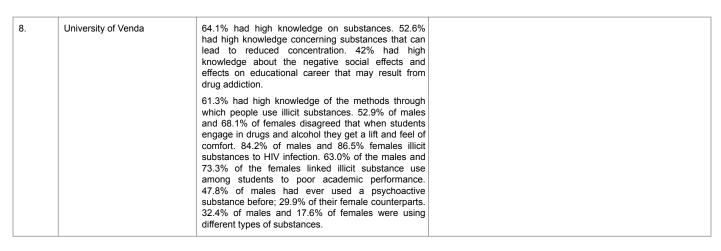|			
3.	Universities in ASEAN member states		Individuals with poor health status are more likely to be frequent substance users compared to those in good health status (AOR=1.84, 95% CI=1.26-2.68). Poor academic performance causes frequent substance use (AOR=0.50, 95% CI=0.11-2.40). Severe depression causes frequent substance use (AOR=1.13, 95% CI=0.75-0.71). Male students are significantly more likely to engage in both infrequent and lifetime substance use compared to females. Students from lower-middle-income countries are significantly more likely to be frequent and infrequent substance users, but significantly less likely to be ever users compared to those from upper-middle or high-income countries.
	Hebrew University in Jerusalem	A significant increase in knowledge of alcohol and alcoholism after an educational intervention (F(2,154)=151.60, P<.001). Reported positive change in knowledge after intervention (mean difference=33, P<.001).	
4.	Bozok University		20.6% respondents smoked cigarettes while 6.9% used alcohol. Reported a statistically significant difference in students attitudes towards those with substance use disorders based on gender [$t_{(570)}$=6.549; p<0.05]. The male students' attitudes towards those with substance use disorders were more positive than female students.
5.	Eight Universities	Germany	Reported 48.2% of students drinking alcohol only; 10.8% abstain from alcohol; 14.6% drinking alcohol and smoking; 11.2% licit drug users; 5.4% illicit substance users with co-use; 9.8% Hooker (Shisha) users with co-use. Illicit substance use: Amphetamines/Stimulants 2.9%; Ecstasy 2.7%; Hallucinogens 1.5%; Cocaine 1.1%; Synthetic Cannabis 1.0%; Inhalants 0.3%.
6.	Mid-Atlantic Urban University		The students' general attitudes towards harm reduction approaches for opioid use disorder shifted favourably following a substance use disorder course module. Paired t-test results showed a statistically significant difference in the mean scores for pretest attitudes (MD=2.64, SDD=0.16) and posttest attitudes (MD=2.86, SDD=0.12) among social work students. Results from this analysis show there was a statistically significant difference in the mean scores for pretest attitudes (MD 2.64, SDD 0.16) and posttest attitudes (MD=2.86, SDD 0.12) among social work students. Independent itemized analysis of the HRAS survey questions (ND 25) indicated an overall significance of P<.01. Additional comparisons were based on treatment orientation (self-help vs. trans-theoretical) and family history of use by immediate family member. Both treatment orientation groups demonstrated statistically significant shifts in attitudes, self-help: t(70)=-24.55, P<.001, and trans-theoretical: t (52)=-14.31, P<.001. This was also consistent with the family history variable, immediate family history of use: t(70)=-17.744, P<.001, and no immediate family history of use: t(52) =-20.40, P<.001. Results indicated an overall positive shift in attitude among social work students after completing the module on harm reduction for OUDs. Students reported that they had exposure to SUDs through a family member with a SUD, whereas 84% reported that they had a friend with a SUD. Social environment context, 63% of students reported they lived or previously lived in an area where there was ongoing substance use.
7.	Private University in Khartoum State		Prevalence 31%; Tobacco 13.7%; Cannabis 4.9%; Alcohol 2.7%; Amphetamines 2.4%; Tranquilizers 3.2%; Inhalants 1%; Opiates 1.2%; Cocaine 0.7%; Heroin 0.5%. Reasons for use=Curiosity 33.1%; Peers 40.9%. Adverse health effects=Health problems 19.7%; Theft 19.7%. Male more linked with use (AOR: 5.55; 95% CI (3.38, 9.17))

8.	University of Venda	64.1% had high knowledge on substances. 52.6% had high knowledge concerning substances that can lead to reduced concentration. 42% had high knowledge about the negative social effects and effects on educational career that may result from drug addiction. 61.3% had high knowledge of the methods through which people use illicit substances. 52.9% of males and 68.1% of females disagreed that when students engage in drugs and alcohol they get a lift and feel of comfort. 84.2% of males and 86.5% females illicit substances to HIV infection. 63.0% of the males and 73.3% of the females linked illicit substance use among students to poor academic performance. 47.8% of males had ever used a psychoactive substance before; 29.9% of their female counterparts. 32.4% of males and 17.6% of females were using different types of substances.	

Table 2: Knowledge, Attitude and Practices on SUDs among university students from different countries.

The United Nations-World Population Prospects 2010 [16] reported that illicit use contributed to 99,000-253,000 deaths globally in 2010 with drug-related deaths accounting for 0.5-1.3% of all-cause mortality among those aged 15-64 years, at 18.74 million. Heroin, cocaine, and other drugs kill around 0.2 million people each year.

A study by Hsu et al. reported five substances mostly abused in medical institutions during the last decade. These were heroin, methamphetamine, benzodiazepines, ketamine, and zolpidem. Heroin and methamphetamine continued to be the first two abused drugs reported by medical institutions. The study further reported 3, 4-Methylenedioxy-N-methylamphetamine (MDMA) abuse to have re-emerged gradually increasing since 2010 while injection without needle sharing being the most common route of administration of abused drugs since 2002.

Substance use disorders among university students in Africa

A study in Nigeria by Awosusi et al. with a sample size of 2297 respondents, reported that low substance use is associated with knowledge of health effects (physical, social and psychological health). The study reported majority of the respondents to use alcohol and with a higher percentage compared to that of cigarette smokers 26.9% and marijuana users 14.8%. These findings are in tandem with a similar study that supported the assertion that substance use is common among undergraduate students in Nigeria; Alcohol and tobacco being the most common substances [17].

A study among college students in Eldoret, Western Kenya indicated 69.8% as the lifetime prevalence rate of a substance. Lifetime prevalence rate of alcohol use was 51.9%; cannabis 2%, cocaine 0.6% and cigarettes 42.8% with males having higher rates p<0.05. 75% were introduced by a friend; 23.5% by a relative; 62.2% used substances for relaxation and 60.8% to relieve stress.

Substance use disorders among university students in Asia

Few studies have been conducted in Asian countries, providing scanty information on types of illicit drugs. A study in India reported cannabis use in 7% of the students [18].

Islamic countries continue to experience an increase in substance use regardless of drugs and alcohol being illegal and against Islamic religion. Most affected are young people and women [19]. In the Middle East, Kuwait has reported 14% lifetime prevalence of illicit drug use [20] with Iran reporting 8% prevalence [5]. Studies in Asia noted a trend of combining illicit drug use with other substances [18].

Substance use disorders among university students in America

The United States, reported prevalence of illicit drug use ranging from 11% to 17%, and the prevalence of current use ranged from 6% to 8% [21]. A study by Arria et al. [22] reported prevalence of drug use among college students persisting even after graduating from college.

Substance use disorders among university students in Europe

A study of seven universities in the United Kingdom reported 5% students sampled regularly using illicit drugs, and 25% being occasional users [23]. Another similar study in Wales reported common substances abused by university students were alcohol, cigarettes, cannabis, ecstasy, nitrous oxide and cocaine (2017). A study in France, students indicated perceived stress to be linked to alcohol misuse [24].

Conclusion

The findings from the reviewed studies suggest university students have knowledge on what psychoactive substances are. Most reported substances among university students are alcohol, tobacco and marijuana. University students have knowledge on the reasons for substance use, a high number citing peer pressure and curiosity mostly as a result of the sense of independence and freedom that comes with university and college life. The findings indicate a higher prevalence in male students as compared to female students. Educational interventions result in significant increase in knowledge of SUDs.

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