

Evaluation of the awareness and perception of professional students in medicine, business and law schools of Karachi, regarding the use of (recreational) cannabis

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Abstract

Objective: To assess the awareness and perception of students attending professional medicine, law and business schools regarding recreational use of cannabis.

Methods: The cross-sectional study was conducted between June 2010 and November 2010. Using convenience sampling, 150 students from medical, business and law schools from both private and public sectors were enrolled. Government institutions included, Sindh Medical College, Institute of Business Administration and S.M. Law College, private schools were Ziauddin Medical College, SZABIST and Lecole for advanced studies. Data was collected through self-administered questionnaire. SPSS 17 was used for statistical analysis.

Results: A total of 250 students were approached out of which 150(60%) filled the questionnaire. Of them 91(60.7%) were males and the overall mean age of the respondents was 22±2 years. A total of 68 (45.3%) students were from the medical field, 53 (35.3%) from business and 29 (19.3%) from law. The private and public sectors were equally represented at 75 (50%) each. Overall, 93(62%) agreed that hashish is a serious problem concerning student population. When asked to identify factors encouraging abstinence, 67(44.7%) respondents each cited religion and health risks.

Conclusion: Our youth is not only concerned about the menace of hashish and but want proper awareness to be provided.

Keywords: Hashish, Knowledge, Perception, Substance abuse. (JPMA 64: 1025; 2014)

Introduction

Substance abuse is one of the most important factor of today's social issues, with an estimated 4.7% of the global population over the age of 15 consuming illicit drugs annually.¹ Substance abuse refers to a maladaptive pattern of substance use leading to clinically significant impairment or distress, manifested by one or more of the following symptoms within a 12 month period: recurrent substance use in situations that cause physical danger to the user; recurrent substance use in the face of obvious impairment in school or work situation; recurrent substance use despite resulting in legal problems or recurrent substance use despite social or interpersonal problems.²

The most commonly abused drug is heroin followed by hashish and charas (both of which are derived from resinous exudates of the flowering tops of female cannabis sativa plant), bhang, opium, alcohol and psychotropic drugs.³ Cannabis is a generic term used to denote the several psychoactive preparations of the plant

Cannabis sativa. The major psychoactive constituent in cannabis is Δ -9 tetrahydrocannabinol (THC). Compounds which are structurally similar to THC are referred to as cannabinoids. The Mexican term 'marijuana' is frequently used in referring to cannabis leaves or other crude plant material in many countries. The un-pollinated female plants are called hashish. Cannabis oil (hashish oil) is obtained by solvent extraction of the crude plant material or of the resin.¹

In Pakistan, there is minimal awareness of illicit substances and their effects; due, in large part, to the lack of prevention programmes and initiatives in schools and universities that might reach out to the student population that, despite being well-informed in its own right, is also liable to turn to substance abuse.^{5,6} A background paper, Narcotics & Pakistan,⁷ cited rigid, outdated curriculum and teaching methods, inadequate recreational centres and weak parental influence as possible causative factors.

Family plays a key role in preventing tobacco, alcohol and illicit substance use and to promote health among teenagers. According to the National School of Health (NSH) survey, living with both parents is a protective factor for smoking, drinking and drug abuse and things as

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minor as sharing a meal with parents and the fact that the parents know what the adolescents do in their spare time are also protective factors.⁸ The most common deterrents against substance abuse include morality, religion and harmful effects of drugs.⁵ The stress of family life, student life, and living in a state of political and economic uncertainty are all contributing factors to the desire to use illicit substances.

In a 2006 study conducted on Pakistani medical students belonging to a private institute, 96% of students attenuated peer pressure to be one of the major reasons for using drugs, with academic stress following at a close 90%, and curiosity at 88%.⁵ Another study conducted among Norwegian adolescents gave similar results attributing curiosity and peer pressure to be the major reasons for students abusing drugs with family conflicts, school and mental problems following closely.⁹ In a study carried out on a Thai population, male gender was associated with every untoward drug-related behaviour. Another important risk factor was poor self-esteem while socio-environmental factors included being in a gang and loneliness.¹⁰ Living away from home especially in a college male hostel predisposed one to substance abuse.^{5,11}

Even among medical students, who are expected to be aware of the harmful nature of illicit substances, there is a significant bout of illicit substance abuse, with the drug of choice usually being cannabis, also known as a "gateway drug" as it is the strongest predictor of future cocaine use.^{2,12} The United Nations Office on Drugs And Crime (UNODC) 2008 estimates suggest that Asia contains the greatest number of cannabis users (51 million), almost a third of the estimated total, ahead of Africa (42 million) and America (41 million) which account for about a quarter each of the total number of cannabis consumers.

The medical personnel are especially vulnerable to substance abuse and dependence due to their ready accessibility to the substance. Many studies have estimated this prevalence among medical students who have even been known to use methylphenidate in order to enhance their academic performance.¹³

However, in this study the objective was to investigate students' perceptions of the cannabinoid derivative, hashish, which is a commonly known, illicit recreational substance that is particularly popular in Pakistan. The United Nation's Illicit Drug Trends Report on Pakistan, reveals that "cannabis is the most commonly abused substance and 'drug of choice' given its low price and easy availability."¹⁴ It is understandable that knowledge about the desirable and undesirable effects of the drug may significantly alter the drug's usage. We, therefore,

aimed at assessing the attitude and perception of professional students in medicine, business and law schools of Karachi, regarding the use of cannabis. The results of the study will be used to provide awareness to university students and faculty.

Subjects and Methods

The cross-sectional study was conducted between June 2010 and November 2010. Using convenience sampling, 150 students from medical, business and law schools from both private and public sectors were enrolled. Government institutions included, Sindh Medical College, Institute of Business Administration and S.M. Law College, private schools were Ziauddin Medical College, SZABIST and Lecole for advanced studies. Consent was obtained from the relevant authorities of each institute before the commencement of the survey. The sample size was calculated on the basis of a prevalence of 7% illicit drug abuse in Pakistan.¹⁶

Only 10 students were approached from each year of study from each institution. Only those students were selected in the study who were present on the day of data collection. Data was collected via a structured, self-administered questionnaire in English language. Pilot testing was done on 10 students of Ziauddin University, Karachi, and suggestions were incorporated before actual data collection. SPSS version 17.1 was used for statistical analysis. Separate frequencies and percentages were calculated for categorical variables. Association was assessed through the application of chi square test and p value less than 0.05 was taken as significant. Variables of interest were: gender distribution of those who viewed cannabis use negatively and those who had a positive perspective;;distribution based on graduation majors (medicine, law, business) of students, on their perception and awareness of cannabis abuse; and students studying in public and private sectors and differences in their ideas regarding the issue.

Informed written consent was obtained before the distribution of the questionnaire and identity of the participants was kept anonymous.

Results

A total of 250 students were approached out of which 150(60%) completed the questionnaire. There were 91(60.7%) males and the overall mean age of the respondents was 22±2 years. A total of 68 (45.3%) students were selected from Medicine, 53(35.3%) from Business and 29(19.3%) from Law. There were 75(50%) respondents each from the private and public sectors.

Hashish is a serious problem concerning student

Table-1: Association between Public and Private University students and their knowledge and perception.

		Public %	Private %	P-value
1. Have you ever been informed about substance abuse in school?	Yes	40	69.3	<0.005
	No	60	30.7	
If yes, did you think the session was effective?	Agree	18.7	41.4	0.004
	Disagree	6.7	13.3	
2. Do you think hashish use is a major problem in the university students?	Yes	45.3	78.7	<0.005
	No	53.3	21.3	
3. Do you think that a person can become dependent on hashish?	Yes	70.7	61.3	0.405
	No	12	18.7	
4. Which of the following would you expect from a person who is under the influence of hashish?	Weight loss	37.3	60	0.005
	Memory problems	37.3	60	0.005
	Feeling of elation	10.7	36	<0.005
	Creative thinking	6.7	24	0.003
	Increases sex drive	16	42.7	<0.005
	Confusion	30.7	54.7	0.003
	Distorted perception	16	40	0.001
5. Complications that can arise due to long term use of hashish?	Psychiatric disorders	41.3	80	<0.005
	Death	33.3	30.7	0.726
6. Do you think that a person that uses hashish also...	uses other drugs	49.3	69.3	0.013
	smokes cigarettes	56	86.7	<0.005
	has a criminal history	33.3	8	<0.005
	is antisocial	37.3	14.7	0.002
7. Most important reason for students NOT using hashish?	Health risk	41.3	48	0.466
	Religion	46.7	42.7	0.687
8. Do you know anyone personally who has used hashish?	Yes	29.3	62.7	<0.005
	No	70.7	37.3	
9. Would you like there to be awareness programmes about drugs such as hashish?	Yes	57.3	77.3	0.009
	No	42.7	22.7	
10. Do you believe that awareness programs about drugs such as hashish would help prevent its use?	Yes	84	78.7	0.402
	No	16	21.3	
11. Most effective medium to spread awareness about substance abuse?	Magazines	29.3	17.3	0.003
	Pamphlets	22.7	20	0.892
	Internet	28	22.7	0.099

population, agreed 93(62%), out of which 31(41.4%) belonged to a public institute while 26 (34.7%) attended private universities. Of these, 57(38%) agreed that our society is concerned with the use of hashish, while 51(34%) disagreed. Awareness programmes for drug abuse was unheard of by 70(46.7%) whereas 55(36.7%) knew about them. Information had been provided in schools about substance abuse to 82(54.7%), and of those 45(30%) said the sessions were effective, while 15(10%) did not agree.

Overall, 73(48.7%) students correctly identified weight loss and memory problems as possible symptoms, whereas other symptoms identified included: dizziness 66(44%), violent behaviour 67(44.7%), confusion 64(42.7%), sleeplessness 57(38%), increased libido 44(29.3%), distorted perception 42(28%), blurred vision 36(24%), feeling of elation 35(23.3%), numbness 31(20.7%), excessive energy 26(17.3%), creative thinking

23(15.3%), and increased suspiciousness 19(12.7%). Correct complications identified by the students included: psychiatric disorders 91(60.7%), social problems 87(58%), cancer 55(36.7%), death 48(32%), bronchitis 38(25.3%), impaired learning 36(24%), and infertility 33(22%). Besides, 99(66%) students correctly identified that hashish is not physiologically addictive and causes no withdrawal symptoms, but it is psychologically addictive and habituating.

A student using hashish is more likely to try other illicit substances, thought 89(59.3%) of those questioned. Other answers included: He is more likely to smoke cigarettes 107(71.3%), is antisocial 39(26%), abuses prescription medications 49(32.7%), drinks alcohol 85(56.7%), has a criminal history 31(20.7%), is very aggressive 42(28%), drives recklessly under the influence of the drug 45(29.3%), and disrupts class often 30(20%).

Table-2: Association between Students Subject major and their knowledge and perception.

		Medicine %	Business %	Law %	P-value
1. Have you ever been informed about substance abuse in school?	Yes	54.4	50.9	62.1	0.625
	No	45.6	49.1	37.9	
If yes, did you think the session was effective?	Agree	33.8	20.7	37.9	0.381
	Disagree	5.9	13.2	13.7	
2. Do you think hashish use is a major problem in the university students?	Yes	54.4	73.6	58.6	0.118
	No	45.6	24.5	41.4	
3. Do you think that a person can become dependent on hashish?	Yes	79.4	60.4	44.8	0.001
	No	8.8	24.5	13.8	
4. Which of the following would you expect from a person who is under the influence of hashish?	Weight loss	52.9	47.2	41.4	0.56
	Memory problems	52.9	47.2	41.4	0.56
	Feeling of elation	30.9	15.1	20.7	0.117
	Creative thinking	14.7	15.1	17.2	0.949
	Increases sex drive	25	35.8	27.6	0.418
	Confusion	51.5	47.2	13.8	0.002
	Distorted perception	41.2	17	17.2	0.005
5. Complications that can arise due to long term use of hashish?	Psychiatric disorders	70.6	62.3	34.5	0.004
	Death	20.6	50.9	24.1	0.001
6. Do you think that a person that uses hashish also...	uses other drugs	58.8	73.6	34.5	0.003
	smokes cigarettes	66.2	79.2	69	0.274
	has a criminal history	17.6	28.3	13.8	0.212
	is antisocial	32.4	30.2	3.4	0.008
7. Most important reason students would have for using hashish?	Curiosity	14.7	18.9	17.2	<0.005
	Peer pressure	29.4	24.5	20.7	0.351
8. Most important reason for students NOT using hashish?	Health risk	52.9	43.4	27.6	0.002
	Religion	52.9	52.8	10.3	<0.005
9. Do you know anyone personally who has used hashish?	Yes	44.1	52.8	37.9	0.396
	No	55.9	47.2	62.1	
10. Would you like there to be awareness programmes about drugs such as hashish?	Yes	85.3	58.5	41.4	<0.005
	No	14.7	41.5	58.6	
11. Do you believe that awareness programmes about drugs such as hashish would help prevent its use?	Yes	86.8	86.8	58.6	0.002
	No	13.2	13.2	41.4	
12. Most effective medium to spread awareness about substance abuse?	Magazines	19.1	30.2	20.7	0.404
	Pamphlets	20.6	28.3	10.3	0.002
	Internet	23.5	37.7	6.9	0.002

Regarding experience, 35(23.3%) of the students knew a location from where they could purchase hashish, while 69(46%) knew someone who used hashish. Students in private institutions were more likely to know a user 47(66.2%) than those in public institutions 22(29.3%) (Table-1). Besides, 43(28.7%) students had been offered hashish at some point and 26(17.3%) had considered using hashish. Occasional use of hashish was justified by 26(17.3%). Among them, 7(24.1%) were law students. In contrast, 124(82.7%) students did not justify hashish use under any circumstances; 60(88.2%) of them being medical students (Table-2).

Social situations seemed to be more tempting to students while deciding whether to indulge in hashish use; with scenarios like in the company of friends 67(44.7%) and at

parties 52(34.7%) being the leading ones.

The top reasons why certain students take hashish included addiction 61(40.7%), depression 54(36%) and stress 49(32%) (Figure). Recreation 31(20.7%) and peer pressure 39(26%) were not sufficient to make a student consider using hashish. Exams and curiosity, 39(26%) and 25(16.7%) each, were even less likely.

When asked to identify the factors that lead to abstinence of hashish use, the respondents cited religion 67(44.7%) and health risk 67(44.7%) as the most potent reasons. Supportive families were considered far more effective by 56(37.3%) than the strict ones 40(26.7%) in preventing hashish abuse. Students were mostly indifferent about the fear of repercussions 41(27.3%) and what their friends thought when choosing not to use hashish 31(20.7%). Majority of the

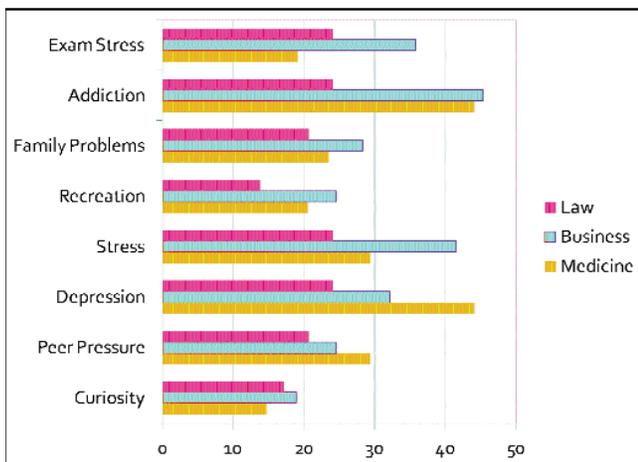


Figure: Reasons for using Hashish.

students thought that awareness programmes are effective and would prevent the use of illicit drugs 122(81.3%), and 101(67.3%) said they would like awareness programmes about drugs such as hashish.

When asked about the most effective media source for creating awareness, newspapers fared better than any other print media 45(30%). Community-oriented programmes appeared to be a better strategy with television broadcasts 75(50%), billboards 55(36.7%) and student programmes 50(33.3%) cited as the most effective, with newspapers and internet 45(30%) and 38(25.3%) following closely.

Discussion

Substance abuse and use of alcohol are the direst of today's social and health issues, especially affecting the younger population. A large number of studies focussing on these issues have been carried out.^{8,10,16} However, only limited research has been performed on the use of hashish, which is regarded as the "drug of choice" as it is readily available and cheap in Pakistan.

Students make up a significant population of drug users and are known to use illicit substances for assisting in academic performance and recreation.^{5,6,12,13} Given that college students have more resources to locate and obtain drugs, we conducted our research on students of three fields of professional education, namely medicine, business and law.

We observed varied levels of awareness among students in different fields of professional education. Despite having the knowledge about the effects and possible consequences of using hashish, medical students use hashish as a coping mechanism under conditions of

depression and stress. We believe that the low threshold and higher acceptance among medical students for use of hashish in times of depression and stress reflects their tough routine and academic pressure. This belief was supported by our observation of results from students of all three fields of education. Medical students were the only ones who correctly identified that hashish is not physiologically addictive and has no withdrawal symptoms and given that it is only habituating/habit-forming, it is even less dangerous than nicotine or even caffeine.

Regarding the popularity of drug use and students' experiences, the study indicated that 46% of the students knew someone who used hashish, out of whom 54.9% were males and 32.2 % were females. Students in private institutes (62.7%) were more likely to know a user than those in public institutes (29.3%). Private institutes have significantly higher tuition fees as compared to public institutes and we believe that private college students are more likely to belong to affluent families and therefore have greater resources to obtain drugs. Besides, 34.1% of the male students and 6.8% of the female students knew a location from where they could purchase hashish; 28.7% said they had been offered hashish at some point in their lives, out of which 39.6% were males and 11.95 were females; and 17.3% said they had considered using hashish.

Social circumstances seem to play a particularly crucial role in the decision to use hashish. The major contributions resulting in predisposal to substance abuse were friends and parties. According to students of private institutions, the use of hashish is greater after exams whereas the public institute's students believed that students are more prone to using hashish before exams.

The most common reasons for using hashish identified by our subjects were depression and stress. This illustrates the increasing amount of stress — physical and mental, including lack of sleep, long work hours, troubled relationships, financial and career pressures, challenges with life goals — in youth that is liable to lead to self-destructive behaviour and increased incidence of suicide and para-suicide. Recreation and peer pressure were not sufficient to make a student consider using hashish. Exams and curiosity were even less likely. Many of these factors predisposing to drug abuse perceived by our subjects have already been established through studies conducted in other parts of the world. These include peer pressure, academic stress, curiosity, family conflicts, living in hostels and male gender.^{5,9,10,11}

The most common reasons for not indulging in illicit substance use, as identified by the subjects, included religion and health risk. An individual belonging to a

supportive family is less likely to succumb to hashish abuse as compared to one coming from a strict family. According to NSH survey, one of the protective factors for smoking, drinking and drug abuse is the parental influence. Sharing a meal with parents and the fact that the parents know what the adolescents do in their spare time are minor things that lead to less chances of an individual being a smoker or drug abuser.⁸ Interesting thing here is that students were mostly indifferent to what their friends thought when choosing not to use hashish.

Majority of the students thought that awareness programmes are effective and beneficial in preventing the use of illicit drugs (81.3%). Besides, 77.3% of the private students and 57.3% of the public students were in favour of having awareness programmes about substance abuse. Out of these, 85.3% were medical, 58.5% were business and 41.4% were law students. When asked to make recommendations regarding the most effective medium to spread awareness about substance abuse, students recommended community-oriented programmes to be a better strategy with television broadcasts, billboards and student programmes as the most effective. The interesting thing here is that newspapers fared better than any other print media.

Our study is the first, among others that evaluated the perception of students regarding drug abuse,^{5,8,10,11,16} to include three different fields of professional education and to compare them with each other. The study also included students from both private and public sectors so as to provide generalisation of results and comparison of trends of substance abuse in the two groups.

The cross-sectional study gives a snap-shot of the student population of Pakistan in medicine, business and law fields of professional education and didn't allow us to study the cause-and-effect relationship between different stressors and the use of illicit drugs. Longitudinal studies emphasising on causal relationship carried out on a larger population and including other fields of professional education would be helpful. Another bias in our study is the non-response bias. Interviewing the students absent at the time of study and non-responders at a later time would be beneficial.

Conclusion

Students believed that substance abuse is a significant problem in our community and a pertinent concern that must be addressed. Knowledge of the effects of illicit

substance use was poor, predominantly among the business and law students. Private institutions had a larger proportion of students who knew how to obtain hashish as well as someone who uses it. Counselling programmes to support students and to guide them, especially during difficult periods of their academic life, should be implemented.

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