

# SUBSTANCE USE AMONG STUDENTS OF PROFESSIONAL INSTITUTES OF KHYBER PAKHTUNKHWA

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## ABSTRACT

**Objective:** The study was aimed at determining the frequency, common type and causes of substance use among the professional institute of Khyber Pakhtunkhwa, Pakistan as well as comparing substance users based on gender and their residence (day scholars versus hostellers).

**Methodology:** Three professional institutes i.e., Khyber Medical College (KMC) Peshawar, University of Engineering and technology (UET) Peshawar and Ghulam Ishaq Khan University (GIK) Topi were selected from Khyber Pakhtunkhwa, for the study. From these three institutes, 300 willing participants both men and women were selected. Alcohol, Smoking, Substance Involvement Screening Test was administered on the sample. Chi-square was used to analyze the data.

**Results:** Hundreds students each were taken from KMC, UET and GIK. The age range of the sample was 19-25 years with a mean of  $21.76 \pm 1.16$  years. There were 204 (68%) students using various substances. Out of these, 138 were males and 66 females. The common substance used by the students was tobacco products ( $n=124$ , 41.4%) followed by sedatives ( $n= 44$ , 14.7%) and alcohol ( $n=20$ , 6.7%). Out of 152 students residing in hostels, 91 were using substances compared to 63 out of 148 day scholars.

**Conclusion:** The study revealed that Tobacco was the most common substance used in the study population. Males and students living in hostels were more substance consumer as compared to females and day scholars, respectively.

**Key Words:** Substance use, Students, Professional institutes.

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## INTRODUCTION

Substance users are individuals who use drug with or without prescription for the sake of pleasure or gratification, but later on become dependent on the substance and increase the dosage to get the desired level of satisfaction<sup>1</sup>.

To understand the attitudes towards drug addiction integrative models were introduced which addresses related questions<sup>2</sup>. The Moral Model emphasizes to blame the user for a lack of moral character and self-control. The disease model suggests that user required medical treatment rather than punishment. The physical dependence Model is also known as withdrawal avoidance model. It focused on the unpleasant withdrawal symptoms that occur when a person stop taking drugs. The positive Reward model assume that physical dependence can be an important factor for the consumption

of drug of use but it is not the sole explanation for drug addiction.

Various substances have the potential for abuse and dependence. Many of these substances share features that alter the neurons in the area of the brain involved in the regulation of pleasure or reward<sup>3</sup>. Tobacco, alcohol, opium, cannabis, hallucinogens, stimulants, sedatives, Amphetamines and Cocaine are the most common and well known substances. Among these, tobacco is the most common substance used by both gender all over the world. Before cigarette popularity on media it was not very common among women but now the ratio is increasing day by day. Country like Pakistan, where mostly people are conservative and value-oriented is also facing the same problem. The Global Youth Tobacco Survey<sup>4</sup> reported that tobacco consumption ratio among boys and girls have increased from 2:1 to 7:1 respectively. Among the tobacco products, Shisha has

also got substantial popularity among substance users. It is a smoking flavored tobacco in which inhalation smoke is passed via water basin. Many people consider shisha to be less harmful than cigarettes. However, it absorbs more carbon mono-oxide than do cigarettes. It is also evident that water pipe contains serious health risks and cannot be considered as a safe alternative to tobacco smoking.

Substance use among student population is an important issue. The college/university students are the most (fall under late adolescent and early adults) prone towards substance use. The major concern of this period is identity development and peer conformity<sup>5</sup>. To meet the demands of higher education, facing academic stresses, adapting desires of family and society, initiating intimate relationships and new commitments, they are more vulnerable to develop different psychological problems and dependencies<sup>6-10</sup>. Substance use may be the most attractive and gratifying act during this time. Several researches<sup>11-13</sup> reported prevalence and popularity of substance use among student population. University life is a unique experience as it serves as a gateway towards complete independence, away from parental guidance and supervision and a golden opportunity to be the part of a larger group. These perceptions make them vulnerable to try new, previously prohibited and adventurous experiences<sup>14, 15</sup>. It is further argued that curiosity, peer influence and social pressure are the primary reasons for substance use among adolescent. Moreover, mental health problems also lead to develop drug dependency, alcoholism and violent behavior<sup>16-18</sup>. Another research reported that peer pressure (96%) academic stress (90%) and (88%) curiosity are the leading causes for substance use<sup>19</sup>. An Indian study<sup>20</sup> quoted that among the tobacco users (28.8%), smoking was found in 87.5% and tobacco chewing in the form of gutka, khaini, gulmanjan (locally available forms of tobacco) in 37.5% are the predominant means of the use of tobacco. The study also revealed that hostellers were more frequent tobacco users as compared to day-scholars. The factor initiating the use of tobacco was usually peer pressure. Students whose friends currently consume alcohol and tobacco were more likely to take the same substance<sup>21, 22</sup>. It is reported that 9% of the global population of age less than 12 are classified with dependence on psychoactive substance e.g., alcohol<sup>23</sup>. Substance use behavior among professional institutes has significant impact on the health of general population as they are the role model for other students and society.

In Pakistan, substantial research on substance use among student population has not yet been done. In the light of the above mentioned literature the present study aimed to investigate the substance use among the students of professional institutions under study as

well as comparing substance users based on gender and their residence (day scholars versus hostellers).

## METHODOLOGY

A purposive sample (n=300) of boys (n=176) and girls (n=124) was selected from three different professional institutes of i.e., Khyber Medical College (KMC) Peshawar, University of Engineering and Technology (UET) Peshawar & Ghulam Ishaq Khan University (GIK) Topi, during March and April 2012. These three institutes were randomly selected from Khyber Pakhtunkhwa. The age range of the sample was 20-23 years. The instrument used in the study was Alcohol, Smoking and Substance Involvement Screening Test (ASSIST V3.1) which was developed by WHO<sup>24</sup>. The ASSIST (V3.1) consists of eight questions covering tobacco, alcohol, cannabis, cocaine, amphetamine-type stimulants (including ecstasy) inhalants, sedatives, hallucinogens, opiates and other substances. A risk score is provided for each substance, and scores are grouped into 'low risk', 'moderate risk' or 'high risk'.

Administration of the required institutions was approached to seek the approval and cooperation for the research. After having permission, the participants were provided an explanation of the general nature of the research. They were informed of their right to confidentiality and anonymity, as well as their right to suspend participation without penalty. Those who decided to participate were asked to complete the demographic data sheet comprising information e.g. gender, age, institute, socioeconomic status (SES) and residence (Hosteller or not). Later on, ASSIST was given to the participants and requested to circle the numerical score that corresponds to each question. Both written and verbal instructions were given. The result was then compiled and quantified through SPSS 17 using chi-square test.

## RESULTS

Hundreds students each were taken from KMC, UET and GIK. The age range of the sample was 19-25 years with a mean of  $21.76 \pm 1.16$  years. The students using substances were 44, 41 and 69 in KMC, UET and GIK respectively. Majority (n=220, 73.3%) belonged to families with middle class socioeconomic status. There were 152 (50.7%) students residing in the hostels (Table 1).

There were 204 (68%) students using various substances. Out of these, 138 were males and 66 females. The common substance used by the students was tobacco products (n=124, 41.4%). There were more males (n=88) as compared to female (n=36) tobaccos users. Out of these 124 using Tobacco products, 17 (5.7%) were using Shisha and were all males. Sedatives were the second highest (n= 44, 14.7%) substance in use. Sedative use among female (n=23) was high as com-

**Table 1: Socio-demographic characteristics of the participants (n=300)**

Variables		Frequency	Percentage
Institutes	KMC	100 (n=44)*	33.3%
	UET	100 (n=41)*	33.3%
	GIK	100 (n=69)*	33.3%
Socio-economic status	Low	09	3%
	Middle	220	73.3%
	High	71	23.7%
Hostellers	Yes	152	50.7%
	No	148	49.3%

\* The number in brackets shows the number of students using various substances.

**Table 2: Frequency of substance use among male and female students**

Substances	Male (n=138/176)		Female (n=66/124)		Total (n=204/300)		p-values
	No.	%	No.	%	No.	%	
Tobacco products (Including Shisha)	88	50	36	29	124	41.3	< 0.001
Sedatives	21	11.9	23	18.6	44	14.7	< 0.001
Alcoholic beverages	15	8.5	5	4.0	20	6.7	< 0.001
Cannabis	10	5.7	2	1.6	12	4.0	< 0.001
Cocaine	3	1.7	0	0	3	1.0	< 0.001
Amphetamines (Stimulants)	1	0.6	0	0	1	0.3	< 0.001
Total	138	78.4	66	53.2	204	68	

pared to males (n=21). Out of 20 (6.7%) students using alcohol, three fourths were males. Cannabis usage was reported by 12 (4%) students which were mostly males. No one reported of using Opioids, Hallucinogens or Inhalants (Table 2).

Any substance used through injection was reported by 13 (4.3%) students in which females were slightly in majority (n=7).

Out of 152 students residing in hostels, 91 were using substances compared to 63 out of 148 day scholars.

## DISCUSSION

The present study was designed to explore the frequency of substance use among students of professional institutions and the impact of hostels/boarding on substance use. Many researchers have contributed their efforts to find out substance use among professional colleges. A study reported that 2135 medical students from 76 medical colleges attending an inter-college event found current alcohol use of 7.1% and current tobacco (oral or smoked) use of 6.1%<sup>25</sup>. Another study conducted during 1993 among undergraduate medical

students in 2 medical colleges of Calcutta indicated that 48.9% of the respondent students were abusing drugs<sup>26</sup>. The same trend in results was found in Nigeria as well<sup>27</sup>.

Our results show that Tobacco products constitute the most common substance used by both men and women in the present population. Various other factors might be considered for the wide spread use of tobacco. One of the most important reasons is peer conformity and group pressure. Moreover it is socially acceptable, easily available and affordable in almost all over the world. The present research also revealed the social acceptance of shisha among students population, despite the limited cafés and shisha lounge in Khyber Pakhtunkhwa.

Sedatives were also noted as second most common substance used by the students. Like other underdeveloped countries, in Pakistan self-medication is very common practice. This seems the major cause of using sedative drugs among students. Moreover, they use such drugs in order to avoid educational stress and workload, and to remain awake at night.

Different researches proved that the stress related to education and some aspects of training have negative effects on the student's life, which manifest in the form of stress, depression and burnout<sup>28</sup>. This finding is in agreement with other studies conducted in Pakistan that about 65% of medical students found the training period stressful<sup>19</sup>.

The findings of gender comparison are consistent with the prior findings<sup>29</sup> in which substance use was found more among male (45.8%) as compared to female (7.3%).

Additional evidence has shown that male gender was a risk factor for every unfavorable drug-related behavior<sup>28, 30</sup> with a male: female ratio of 3:1<sup>31</sup>. In our setup, male gender has easy access to any kind of drug as compared to women.

The current study is supported by literature<sup>29</sup> that maximum level (66.7%) of substance use was found in students who were living away from their homes. Hostellers were found to be more substance users than non-hostellers<sup>27</sup>.

The frequency of substance use was found maximum in the students who were living away from their homes. Only 29.7% of the students living with their parents were found to be using substances regularly; while 66.7% of students living away from their parents were using the mentioned substances. Similarly, Naskar et al<sup>27</sup> reported more drug use in hostellers as compared to non hostellers at Calcutta as 52.6% and 44.2 % respectively<sup>29</sup>. This shows that when students start living independently and more proximate with their peer group, it puts them in developing risky behavior. Perhaps parental guidance and monitoring effect the attitude of a person, when it is lacking due to away from them increase the chances of being substance users<sup>32</sup>.

The limitations include the purposive selection of students of only 3 professional institutes of Khyber Pakhtunkhwa should be kept in mind while generalizing the results of this study.

## CONCLUSION

Tobacco was the most common substance used in the study population. The results of our study suggest that the frequency of substance use is high among men and hosteller students as compared to females and day scholars, respectively.

## RECOMMENDATIONS

It is recommended that there should be parents-child communication and parents acquaintance of their child's friends, activities etc. A curriculum should be designed at school level to educate the students about substance use, its consequences & risks. Students should be ed-

ucated about their self-worth. Efforts to develop skills for managing conflict, particularly dealing assertively in social setup where substance use is common should be supported.

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### CONTRIBUTORS

UK conceived the idea, planned and wrote the manuscript of the study. KF helped in the data analysis and write up of the manuscript. MMHA supervised the study. All the authors contributed significantly to the research that resulted in the submitted manuscript.