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# Assessment of Substance Use among Students Studying In Islamabad, Pakistan



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#### Abstract

**Background:** Substance use is a leading well known public health problem now a day across the globe that contributes to morbidity, mortality and economic loss. The risk peaks between the age 18 to 25 and highly prevalent in university students. Substance use is a leading cause of injuries and death among the university students across the countries. Tobacco use is a major cause of morbidity and premature mortalities worldwide.

**Objective:** To determine the prevalence of substance abuse among students in colleges of Islamabad and identify the associated risk factors.

**Methods:** A descriptive Institution based cross sectional study was designed to assess the substance abuse among two university students in Islamabad over a six months period. A total of 310 pre-tested questionnaires were distributed through simple random sampling technique and selected students were asked to self-report on use of substance and associated risk factors.

**Conclusion:** There were 182 males and 128 were female students. Mean age of the students was 20. 73 years. The six-month prevalence rate of smoking was the highest substance use with 23.7%. Binge drinking was second most common was estimated with 8.5%. The prevalence rate for Naswar and Heroine was 6.1% and 4.7% respectively. Chi-square test was used to find out association while gender and mental relaxation were statistically significantly associated with tobacco among all factors. Logistic Regression technique was utilized to assess the factors associated with substance use. The use of all four substances were associated with multiple problems. Immediate educational interventions are necessary to assist students in making responsible choices.

Keywords: Tobacco; Alcohol; Substance abuse; Estacy. Illicit Drugs

## Introduction

Since beginning of the history, humans had searched for substance that acts on nervous system to produce pleasure sensation. In developing countries recent trends indicates a dramatically increased in the use of psychoactive substance despite of medical advancement in the 21st century [1]. Alcohol is as old as human history and believed to be first known chemical mood modifier [2]. Persistent substance uses without an unrelated medical practices refers to harmful and hazardous illicit drugs lead to dependence syndrome according the World Health Organization. The dependence syndrome develops after repeated substance use is a cognitive and physiological phenomenon increased physical withdrawal state [3].

Chronic use of substance alters the neurotransmitters release with inhibition in nervous system while dopamine is most common affected neurotransmitter. Long term change in these neurotransmitters leads to substance dependency as a

person need to get higher dose than usual to maintain normal body functions. Permeant damage in nerves system cause higher rate of morbidity and mortality. Substance abuse cause sexual assault, accidental injuries, high risk driving, destruction of property, academic problems and adverse health consequences [4]. Use of substances is quite alarming in youth; decreases work productivity and academics performance and increase the absenteeism, violent crimes that lead to the other psychiatric disorder [5]. Students of private colleges are more prone and exposed to substance abuse in Pakistan. Male students belonging to higher economic class involved substance abuse practice than female students [6].

Globalization, changing social values and violent conflict ridden countries have tremendous stress and more visible in adult vulnerable population. Exposure to violence with armed conflict is a potential risk factor for post-traumatic stress disorder with psychosocial problems that indulge youth in substance use [7]. Drug abuse can induce symptoms that resembles with mental illness. It occurs in intoxicated state and during the withdrawal state. Substance use induced psychiatric disorders persist long after detoxification, such as a prolonged psychosis or depression after the amphetamine or cocaine abuse. Protracted withdrawal syndrome can occur symptoms persisting for months after the cessation of use while Benzodiazepines are the most notable drugs. A review of literature across many countries suggests that substance use is tends to peak between the age of 18 to 25 years of age being university students are particular at risk [8].

#### Methods

The study was conducted after ethical consideration of "Helsinki Declaration "prior to administrating the pretested questionnaire. Participants were recruited after their informed consent in the study. The confidentiality of all participants was ensured and the purpose of the study was explained. Data was collected between lectures during the break time. Female trained data collectors were hired for female students. Students from each semester of the study were proportionally allocated to their class size. Overall response rate was 89%. SPSS version 21 was utilized and data was entered on daily basis for accuracy. Descriptive statistics was made for demographic variables, while continuous variables were summarized in mean and standard deviation. All categorical variables were expressed using percentages. Chi-square test was utilized to determine the association between various variables and substance use. A p-value less than 0.05 were considered as the significant results.

Out of total 310, male students were 58% and females were 42% while 81% were age ranged from 19 to 24 years with a mean age of 21.9 (SD =  $\pm$  2.17 years). Education of the students' parents were 72% and majority students were unmarried with 89%. Total 82.1% students were belonging to urban area and had a monthly pocket money range 9000 to 12000 Pakistani Rupees. 17% students were living in the hostel. Among the participants 62.9% used at least one substance in their lifetime. The study revealed that frequency of smoking along with "combination substance" is very high. The frequency of cigarettes per day was 3 to 10 with almost 23% participants.

Concerning the alcohol drinking habits, 8% reported that they drank alcohol once in their lifetime while 14% had drinking alcohol over the last 30 days prior to this study. Furthermore, 17.4% of the study participants used illicit drugs like hashish at least once in their lifetime and Seventy-six (7.4%) of the participants have used illicit drugs in the last 30 days. Naswar was used by 7.2% students; Estacy was used 3% and cocaine 3.8% as contrast to Heroine 11 students with marijuana 7 students. Despite the lower number of regular users of cocaine in this study the figures are still very high. Indeed, there is a need for further interventional strategies to be considered [9-11].

Majority students mentioned different reasons for the use of substance use. 45.7% respondents told that it increases their

academic performance, 25.3% get personal pleasure and 21% get relief form tension while 29% used due to peer influence. Many students told that they used substance to be sociable and to get accepted by others. Initially different variables such as sex, age, amount of pocket money, marital status and depression were considered for the bivariate analysis. After bivariate analysis variables like sex, academic performance, personal pleasure and depression showed a statistically significant association with substance abuse. All these variables were analyzed together using multivariate logistic regression model.

#### Conclusion

In the present study the overall prevalence of substance use was 52.2% for at least one substance. The most commonly using substance is smoking with 23%, alcohol 8.5%, Naswar 6.1%, Heroine 4.7% and 3% other illicit drugs. Sex, depression, personal pleasure and depression were found to be statistically significant predictors of substance use. The study found that being male had a strong association with substance use (AOR (95% CI), 3.17 (2.23, 4.32)). The reason might be due to the fact that male students have high exposure and peer pressure is a more common factor than female students. Moreover, many substances like Naswar and Tobacco are usually acceptable practice among males.

The present study results show an increased prevalence of the risky health behaviors in term of substance abuse. The life time prevalence of substance use among university students is high. The most common substance used among students is smoking while sex, personal pleasure and depression were found to be independent predictors. Substance use among students' demand emergency preventive measures with special attention to target awareness on harmful effect A counseling unit should be made in colleges and universities that is responsible to advice students to prevent depression. Specific strategies should be designed for prevent depression among students. The very easy availability of this substance everywhere in Pakistan is a serious issue. Moreover, students have no intention to quit the substance. Many students belong to middle class and educated families which is an alarming situation. There was no significant difference between pocket money and substance use. Illicit drugs use is prohibited by national law, hence; the use is stigmatized and hidden in society. Therefore, males report higher consumption than do female's students.

### **Limitations of this Study**

Some limitations are need to be taken into the account. As this is a cross-sectional study, and temporal nature of the associations are cannot be elucidated. Hence, longitudinal studies are more needed to investigate a causal relationship.

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