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Research Article

**RISK FACTORS OF ILLICIT DRUG USE AMONG THE
UNIVERSITY STUDENTS OF PESHAWAR, KPK**¹Dr. Muhammad Noman, ¹Dr. Jan Sher Khan, ¹Dr. Sayyed Jalawan Asjad,¹Dr. Kashaf Noor, ²Dr. Muhammad Usman¹Khyber Medical College, Peshawar²KMU Institute of Medical Sciences, Kohat**Abstract:**

Objectives: To assess the prevalence of illicit drug use among university students of private and public universities. And also to assess risk factors of illicit drug use. **Study Design:** Descriptive Cross-Sectional Study was designed to assess the illicit drug use among university students in Peshawar. **Study Duration:** The duration of study was from Nov 2017-April 2018. Ideally presented by grant chart, a sample of which is given below **Methods :** This was a cross sectional study design, in which data was collected from 600 students of public and private sector universities. The sample had an equal gender proportion i.e 300 males and females. Data was collected through questionnaires. The data was then analyzed for the prevalence of illicit drug use among university students and also the associating risk factors of illicit drug use. Chi square test was performed to find out the association of illicit drug use to various factors such as age, living status, availability, source of drug, frequency of intake etc. **Result:** According to data analysis 17.3% students of government colleges were using more than one drug while 82.6% were using single drugs. 26.3% students of private colleges were using more than one drug while 73.6% were using single drug. 80% of public sector had abused prescribed drugs. 73.6% of private sector had abused prescribed drugs. 19.2% public sector students knew multiple drug suppliers. 46.9% students revealed that the drug was available within the university premises. **Conclusion:** Illicit drug use is more prevalent in boarders as compared to day scholars. A good chunk of the students revealed that the drugs most commonly used are cheap. Drugs are more easily available in public sector universities as compared to private ones. There has been a gradual increase in the frequency of drug intake per day in addicts. Illicit drugs had an overall negative effect on the academics of students. A good proportion of the sample believes that parental care plays a key role in preventing their child from indulging into any type of illicit drug use.

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INTRODUCTION:

Illicit drug use is stated as a maladaptive pattern of use of drugs that ultimately leads to clinically, mentally, physically and psychologically substantial impairment or distress of body, mind and social wellbeing, in which the user may also suffer from addiction, tolerance, withdrawal. These are the folks who use them with or without medical prescription just for the sake of pleasure or gratification, but later on first develop psychological dependence and then physical dependence and so thus they increase the dosage of it just to get the desired level of satisfaction and get the same magnitude of high [1]. There are many drugs that can be used illicitly and they have strong potential to develop the dependence among its users. Many of these illicit drugs share properties and features that alter the neurons in the pleasure and the reward area of the brain and thus neurotransmitters levels are altered in such a way that overtime person needs higher and higher doses of the said drug just to combat against the tolerance developed against it [2].

EPIDEMIOLOGY:

The epidemiology of illicit drug addiction in a given society seems to be dependent on various factors but the topmost among them are the cultural values, beliefs and religion and attitude toward the drug use among the people, which are quite variable across cultures, races, countries and geographical regions. All sorts of different drugs can be abused that include illegal drugs (such as heroin opium and cannabis), over the counter drugs (painkillers, cough mixers), tobacco smoking, e-cigarettes, glue sniffing and prescription drugs that are used for non-medical purposes like opioids are used for the pain, CNS depressants that are most commonly misused include benzodiazepines and CNS stimulants that are most commonly abused in the community is amphetamine. In order to understand the attitudes towards addiction among illicit drug users, different integrative models were introduced. The purpose of which is to address the questions related to illicit drug usage [3]. Among it, one was the Moral Model which emphasizes to blame the user for a lack of moral character and self-control. Another one is the Disease Model suggesting that users required medical treatment rather than punishment. The Physical Dependence Model is so known as Withdrawal Avoidance Model. It focused on the unpleasant withdrawal symptoms that occur when a person stops taking drugs. The Positive Reward model assumes that physical dependence can be an important factor for the consumption of illicit drug among the users. Risk factors for illicit drug use can be biological, psychological social and physical

that can increase the person chances of developing a drug addiction or drug dependency disorder.

According to the World Health Organization (WHO), risk behavior is defined as “a specific form of behavior, which is proven to be associated with increased susceptibility to a specific disease or ill-health” [3] Risk-taking behaviors increase during adolescence and young adulthood. [4,5]. These behaviors are associated with heightened reactivity to emotions and a still immature ability to self-regulate [6,7], making adolescence and youth a period of high vulnerability to the negative consequences of risk-taking [8].

RISK FACTORS

Risk factors that influence the chances for the individual to develop the dependency disorders depend on several domains. The first domain is at the individual level in which the early aggressive behavior is the risk factor while the protective factor against it is self-control. The second domain is at the family level in which the risk factor that exposes the individual to drug abuse is lack of paternal supervision. The protective factor against the risk factor related to this domain is paternal monitoring. The third domain is the peer and the risk factor related to it is peer pressure for illicit drug use and this can be minimized by academic competence. Fourth domain is university and the risk factor related to it is availability and provision of illicit drugs in university premises and it can be demoted by administering anti-drug policies by a university. Fifth domain is the community and the risk factor pertaining to it is poverty and protective factor for it is strong neighborhood attachment.

More the numbers of the risk factors to which an individual is exposed, the greater are the chances for him to develop the drug dependency. Some risk factors play the greater role for developing drug dependency in a particular age group than in the other, such as peer pressure in the teenage years; just as some protective factors, such as the parent-child bond, can have a greater impact on reducing risks during the early years. So, to develop prevention against illicit drug use there is need to change the balance between risk and protective factors so that protective factors outweigh risk factors [9]. Several studies on risk behaviors among the young populations have highlighted its long-term consequences on both physical and psychological health of the youngsters [10-12]. A review of literature across many countries and geographical regions of the world suggests that illicit drug use tends to peak between the age of 18 to 25 years of

age; being university students are particularly at risk [13].

College and university years is that period of life that is characterized by intense academic pressure, heightening emotions as well as independence and separation from parental supervision [14]. During this period, opportunities to experiment with psychoactive substances, including illicit drugs, increases. It is such a tender age of life that it increases the temptress to use them just for the sake of inquisition and to get high. In the recent years, the illicit drug use is a big hitch among the university students and they are more prone to develop such maladaptive patterns. This may be due to several reasons which may be, to acquire the identity in the university, socio-demographic characteristics, such as male gender, high family income, living on or off campus on their own, living in an upper-middle- or high-income country and financial burden, peer pressure, intimate relationships and commitments, lack of parental or guardian control and checkup, falling grades, to cope up with the academic stresses, to adapt with the high expectations of family and the community. Illicit drug use is also associated with the use of other substances including tobacco smoking and alcohol drinking, internal states such as anxiety and depression and violent behavior such as the physical fight. Identified protective factors include older age, the higher level of religiosity and living with parents [15].

PREVALENCE

On the global level, several epidemiological studies and researchers have been conducted to estimate the prevalence of illicit drug use and associated risk factors for its use in different countries. According to WHO DRUG REPORT OF 2016, in 2014 about the quarter of billion people (around 247million people) used drugs at least once in their lifetime and 29 million out of them suffered from the drug-related disorders. Out of these 29 million, only 1 individual out of every 6 enrolled in any sort of rehabilitation or medical treatment program. Among them 12 million people take the drug via IV route and 1.6 million people who inject IV are living with HIV while 6 million are suffering from hepatitis C. Cannabis remains the most commonly used drug at the global level, it was estimated that about 183 million people have used the drug in 2014, while amphetamines remain the second most commonly used drug. It was estimated that there are 33 million users of opiates and prescription opioids. As an overall trend at the global level, the use of cannabis has remained stable over the past three years. But in some sub regions, however, particularly North America and Western

and Central Europe, the use of cannabis has increased [21].

In the United States, the past-year prevalence of illicit drug use according to one survey revealed that it ranged from 11 to 17%, and the prevalence of current use somewhat ranges between 6 to 8% [16]. Peltzer and Pengpid, conducted researches and surveys in eight countries in Africa and three in Caribbean countries and using the data collected in these countries it was reported that the prevalence of infrequent (that were used in the frequency of 1–9 times in the past year) and frequent (that were used in the frequency of ≥ 10 times in the past year) illicit drug use was 17 and 4%, respectively [22]. In the United Kingdom, samples were collected from seven universities and 5% of the study sample from them reported the use of illicit drugs on the regular basis, and 25% out of them reported occasional use of them [23].

Only a few studies have been conducted in Asian countries, and those that were even conducted, the information on types of illicit drugs that are being used in the population included in the studies were limited. A study was conducted in India, and the results of the studies showed that 7% of the students reported cannabis use [18]. In the Middle East, researchers related to drug use were conducted in Kuwait and Iran and the results of it showed that the lifetime prevalence of illicit drug use was 14% in Kuwait [17], while on the other hand prevalence of current use was 8% in Iran [19].

South-Asia has the centuries-old history of Opium and Cannabis use sanctioned by society; especially Afghanistan is the hub of illegal cultivation of opium and its trafficking to the other parts of the world in the black. Pakistan had to bear the burden of millions of Afghan refugees, arms, and drug proliferation, as the aftermath of the invincible Afghan war and 9/11 incidence. Pakistan a south Asian developing country is also badly hit by the scourge of drug use as that of the rest of the world. The total population of Pakistan is estimated to be round about 200 million. The majority (95-98%) is Muslim which is highly conservative, customs and religions governing the lives of them. So that is the reason the use of the illicit drug in the public is highly frowned upon, besides it is also against the teaching of Islam. Nevertheless, there is large mass out there that uses different sorts of illicit drug in the hiding. Cultivation of poppy has been carried out in the northern part of Pakistan for a long time. During the British rule over Indo-Pak, subcontinent opium was sold throughout the country in the licensed shops. At the time of

separation in 1947, there were approximately 100,000 regular and registered users of opium in Pakistan [24].

STUDY SETTING

The data was collected from three public universities and three private universities which are following:

1. I M Sciences
2. IQRA University
3. CECOS
4. University of Engineering & Technology
5. University Of Peshawar
6. Islamia University

SAMPLE SIZE

By estimating the population size to be 20,000 from 6 universities of Peshawar the sample size was calculated from sample size calculator in <http://www.raosoft.com/samplesize.html>.

The required sample size was 600 students with 95% confidence level and margin of error accepted was 3.94% and response distribution of 50%.

SAMPLE TECHNIQUE

Stratified quota sampling technique was adopted in study. Two strata were formed on the basis of public and private universities. Within each stratum, samples of respondents of an optimum size with a proportional allocation were interviewed.

DATA COLLECTION METHOD

Data was collected using a questionnaire containing both open and closed ended questions formulated by the researchers. The questionnaire was self-administered and students were briefed about questionnaire and questionnaire were collected 1 day after distribution in a specifically allocated box in sealed envelope.

DATA ANALYSIS

Data was entered and analyzed in SPSS. Frequency was calculated.

RESULTS:

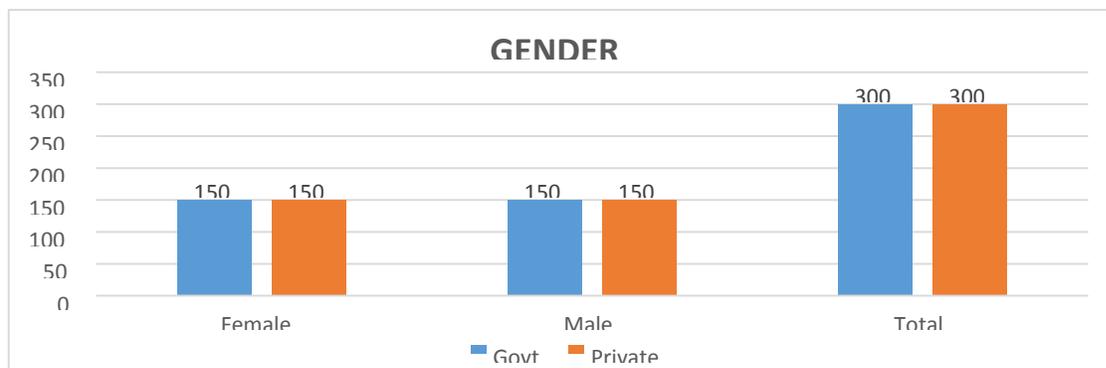
Table 1: AGE

Case	sample size	age
Govt	300	18-25
Private	300	18-25

Our research topic were risk factors of illicit drug use in university students of Peshawar and the age group taken were between 18 and 25 of all the sample population.

TABLE 2: GENDER

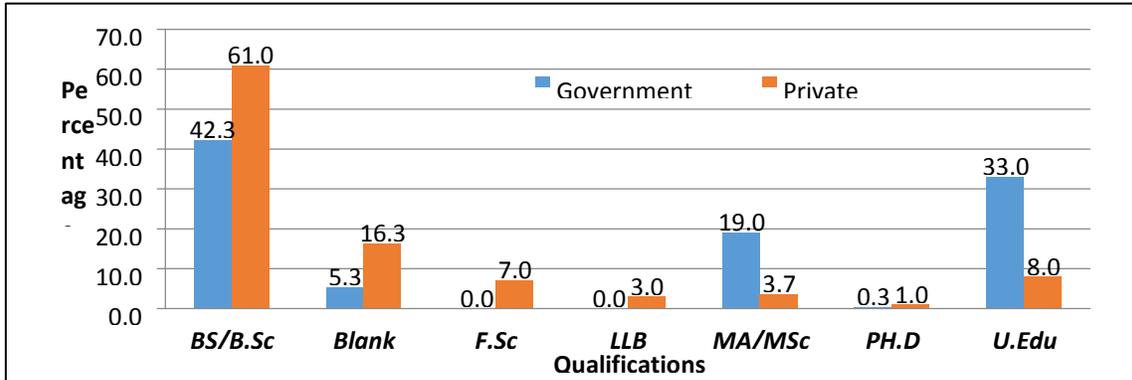
Gender	Govt	Private
Female	150	150
Male	150	150
Total	300	300



The population sample were consisting of 600 illicit drug users, 300 from private (50%) and 300 from govt (50%) colleges were taken. As six colleges were included in our research half of which were private and half were public,

further 100 individuals were taken from each college of which half were males and half were females, details are shown in graph chart.

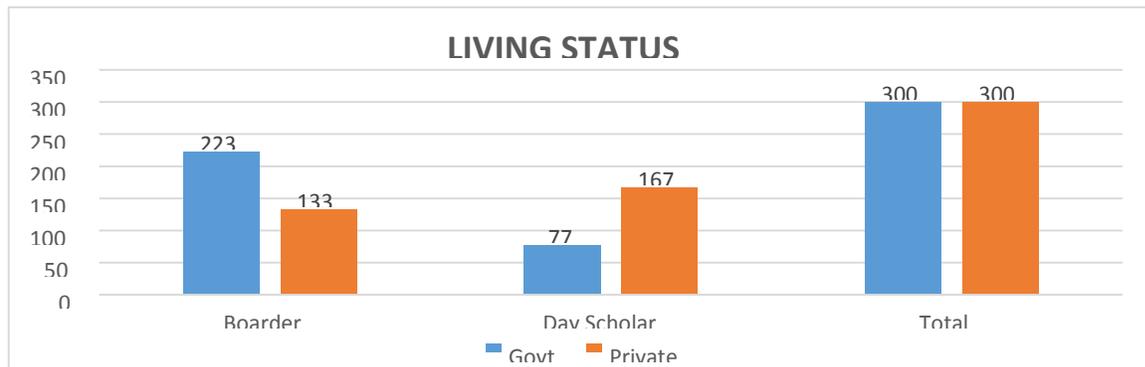
TABLE 3: QUALIFICATION



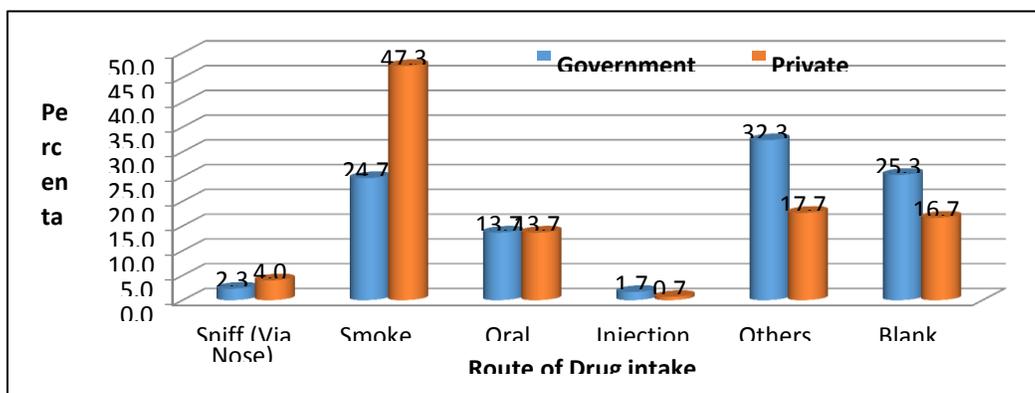
In private universities 61% were doing BS/BSc, 8% U. Education, 15% PhD, 3.7% MA/MSc, 3% LLB, 7% FSc and 16.3 % left this question blank. In government universities 42.3% were doing BS/BSc, 33% U. Education, 0.3% PhD, 19% MA/MSc, and 5.3% left this question blank.

TABLE 4: LIVING STATUS

Gender	Govt	Private	Ch.Sq	P.Palue
Boarder	223	133	55.95	<0.0000001
Day Scholar	77	167		
Total	300	300		



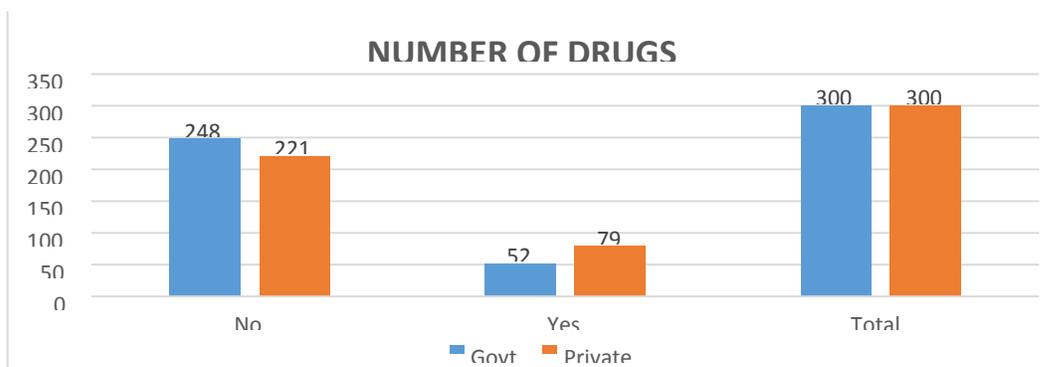
In government universities students 74.3% were boarders and 25.6% were day scholars and in private universities 44.3% were boarders and 55.6% were day scholars.



In private universities 4% were using nasal route for drug intake, 47.3% were smokers, 13.7% were using oral route 0.7% were using injections, 17.7% were using other routes and the rest 16.7% left this question blank. In government universities 2.3% were using nasal route for drug intake, 24.7% were smokers, 13.7% were using oral route 1.7% were using injections, 32.3% were using other routes and the rest 25.3% left this question blank.

TABLE 6: NUMBER OF DRUGS

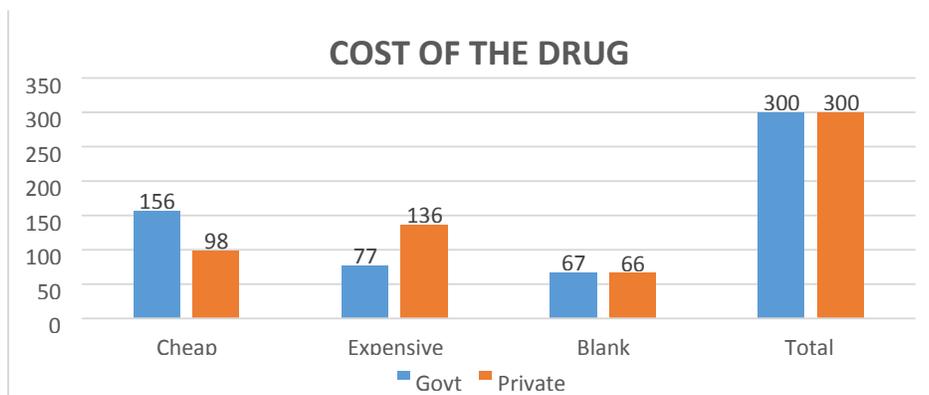
Parameters	Govt	Private	Ch.Sq	P.value
No	248	221	7.119	0.007626
Yes	52	79		
Total	300	300		



17.3% students of government universities were using more than one drug while 82.6% were using single drug. 26.3% students of private universities were using more than one drug while 73.6% were using single drug.

TABLE 7: COST OF THE DRUG

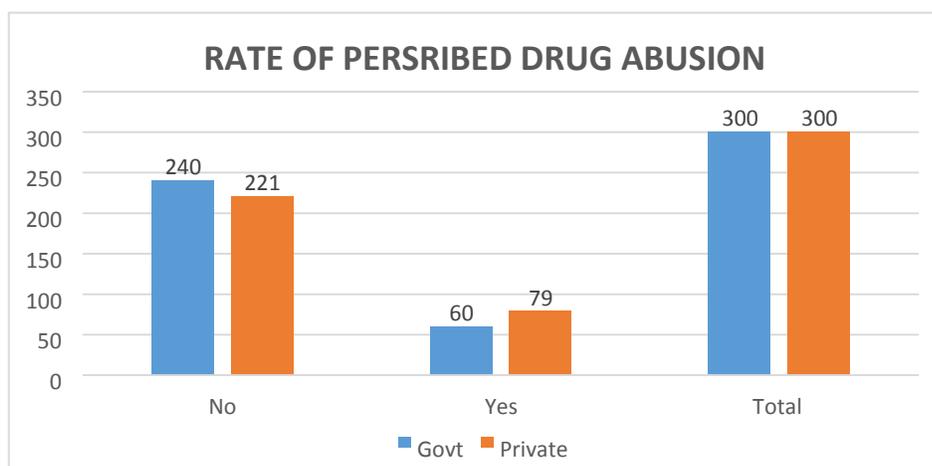
Parameters	Govt	Private	Ch.Sq	P.value
Cheap	156	98	29.58	<0.0000001
Expensive	77	136		
Blank	67	66		
Total	300	300		



According to 52% of students of government universities the illicit drugs they are using are cheap, and according to 25.6% the drugs are expensive the rest 22.3% left this question blank. According to 32.6% of students of private universities the illicit drugs they are using are cheap, and according to 45.3% the drugs are expensive the rest 22% left this question blank.

TABLE 8: RATE OF PERSRIBED DRUG ABUSION

Parameters	Govt	Private	Ch.Sq	P.value
No	240	221	3.38	0.06599
Yes	60	79		
Total	300	300		



In government universities 80% had abused prescribed drug, while 20% had not. In private universities 73.6% had abused prescribed drug, while 26.3% hadn't.

DISCUSSION:

The aim of this study was to investigate the risk factors of illicit drug use among the public and private university students of Peshawar. We also tried to learn the reason for the usage of these drugs and also whether these are any factors associated with use of these illicit drug. In our research the age group were taken as 18- 25 year. Our sample size compromised of 600 students from 6 different

university of peshawar.3private and 3government university i.e. ICP, UET, Agriculture, Iqra, Cecos and i'm'science.100 students were selected from each university in which 50 were male and 50 female. We also found that among 300 students of Government University 74.3% were hostilites and 25.6% were day scholars. Out of 300 students of private university, 44.3%were hostilites and 55.6 % were day scholars. After data analysis, compilation of results and

representation in the form of tables and charts, we found that the most highly risk factor of illicit drug use was seeking pleasure and curiosity. The second risk factor was addiction. Among 300 students of Govt University 41.6% were taking for pleasure and 31.6% were taking for addiction. And among private 40% were taking for pleasure and 28.3 % were taking it for addiction. A same research was conducted in two Jahrom university in 2012-13, also found that seeking pleasure and curiosity were important risk factors of illicit drug use. In course of our study we found that among students of private university 4% were using nasal route for drug intake, 47.3% were smokers, 13.7% were using oral route 0.7% were using injections and 17.7% were using other routes. And among the govt students 2.3% were using nasal route for drug intake, 24.7% were smokers, 13.7% were using oral route 1.7% were using injections and 32.3 were using other routes. In our research we found that out of 300 subjects of govt colleges according to 3.7% chars, 23.0% cigarette and 41.7% snuff is easily available. And in 300 subjects of private colleges according to 5% chars, 32% cigarette and 41.7% snuff is easily available. We found that the most illicit drug used by the students were snuff (snuff) and smoking cigarette. A research conducted in Sudan showed the prevalence of individual drug was tobacco 13.7%, chars 4.9%, alcohol 2.7%, cocaine .7%. Another research conducted in Islamabad showed the prevalence of drug was; cigarette 23.7%, niswar 6.1% and heroine 4.7%. The high prevalence of cigarette smoking among our students showed that these are easily available and approachable to common students.

In our research we found that out of 300 subjects of govt colleges 80% had abused prescribed drug, while 20% hadn't and also in 300 subjects of private colleges 73.6% had abused prescribed drug, while 26.3% hadn't. A same research was conducted in different colleges of USA on use of prescription stimulants such as amphetamines. The data showed that 35.5% students were using prescription stimulants. The increase use of these drugs in Peshawar students shows that these students are under great stress and tension during studying hours and examination preparation. We also found through our research that among the 300 govt students 11.3% were using more than one drugs and 82.6% were using single drug and among private students 26.3% were using more than one drug and 73.6% were using one drug. Among 300 students of govt university 0.7 % used chars for the first time, 59% used cigarette, 0.00% used ice, 10.7% used snuff, 0.3% used these all drugs .And among 300 student of private colleges 4.3% used chars for the first time, 69.7% used

cigarette, 0.3% used ice, 11.7% used snuff, 1.3 % used these all these drugs. The high prevalence of the cigarette smoking for first time shows that these are easily available within our community. Through this research we found that among 300 govt colleges 1% are using illicit for one year, 5.3% for two years, 2.7% for three years ,7.3 % for four years, 1.7% for five year, 9.3% for six years, 0.7% for seven years, 3.0% for eight years ,1 % for nine years and among 300 students of private colleges 0.3% are using illicit for one year, 2.7% for two years, 2.3% for three years ,5.3 % for four years, 1.3 % for five year, 0.3% for six years, 1% for seven years, 1.7% for eight years and 0.3 % for nine years.

Out of 300 students of govt university we found that 14% obtained these drugs from friends, 1% from relatives, 13% from medical store, 30% from any local shop, 17% from others sources and out of 300 subjects of private colleges 28.3% obtained these drugs from friends, 4% from relatives, 9% from medical store, 22.7% from any local shop, 10.3% from others sources. A research conducted in Alhaha city of Saudi Arabia showed that the illicit drugs were introduced through friends. The increased percent of these drugs source from local shops showed that these should be excluded from the territory of the community and the students should choose good friends.

Through this research we found that among govt colleges 19.2% knew multiple drug suppliers, 60% knew single drug suppliers and among 300 subjects of private colleges 14.2% knew multiple drug supplier and 82% knew single drug supplier. The increased rate of single drug supplier showed that because of decrease unavailability of these drugs within university premises and these are supplied by specific persons that may be hostel chachas and waiters. We also found that out of 300 students of Govt University 43.33% were introduced to illicit drug through friends, 4.33% through family members, and 17.3% through others. And among 300 students of private university 48% were introduced to illicit through friends, 8% through family members, 8.6% through others. The high percent of introduction through friends showed that students are not care about in selection of their friends that latter become their identity. We found a strong association of illicit drug users in 300 students of govt colleges 6.6% were engaged in illegal activity, 80.6% weren't engaged in any illegal activity and among 300 subjects of private colleges 9% were engaged in illegal activity, 78.3% weren't engaged in any illegal activity. The reason of involvement in illegal activity was that some of students don't afford the cost of these drugs or taking in high dose these drugs. In our research through questionnaire we found that among

300 subjects of govt colleges 8% used illicit drug once a day, 16% twice a day and 46% many times a day. And among 300 subjects of private colleges 18% used illicit drug once a day, 18.3% twice a day and 33% many times a day. A research conducted in 2015 in Cambodia, Indonesia, Laos, Malaysia, Singapore and Thailand showed that 4.7% were infrequently using the illicit drug use and this percent reached to 16.9% in past 12 months. The high percent of these illicit drug use in our community showed fashion, poverty and Stress. In our research we found that in 300 subjects of govt colleges 22.33% were encouraged to start illicit drug usage and 62.66% weren't. And also in 300 subjects of private colleges 37% were encouraged to start illicit drug usage and 48.66% weren't. The encouragement to start these drugs were either given by their friends or through relatives.

CONCLUSION:

The results concluded that illicit drug use was more common in male students than females. Private universities students were found more abusive than public universities students because of social status and lack of supervision, further because of bad company and lack of parental supervision and easy availability of drugs in hostels boarders were more involved in illicit use compared to day scholar. Most commonly abused substance was tobacco in form of cigarettes. Risk factors of illicit drug use were

- Easy availability of drugs,
- Bad company ,
- lack of supervision,
- Lack of awareness of their side effects.

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