

A study on substance abuse among young people (10-24 years) in urban slums of Jorhat, Assam

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ABSTRACT

Objective: To find out the substances abused by the people in urban slums and also find factors contributing to it. Also to recommend suggestions based on the study

Material and Methods: It was a community based cross sectional study and data was collected using Interviewers Performa after getting approved by the Institutional Ethics Committee. A sample size of 174 was calculated. Young People (10 to 24yrs) who were willing to participate were included and those not ready to take part were opted out.

Results: It was found that males usually 22 to 24yrs used abusive substances than females. Tobacco was the most common substance abused followed by alcohol and majority had been introduced to the substances by their peers between 17 to 24 yrs. Most people consumed the drug multiple times daily followed by weekly and had procured the drug from local retailers. These substances gave them a sense of hallucination and euphoria on consumption. Among the side effects oral problems like ulcers and malignancy topped the list. Respiratory and gastrointestinal issues along with inability to concentrate on work were other side effects.

Conclusions: Based on the results several recommendations were made especially awareness workshops and camps. These programs mainly stressed upon the necessity to create social awareness among the people and their families about the ill effects of substance abuse. All the results were tabulated.

Keywords: substance abuse, Tobacco, alcohol, young people, adolescents, slums, Jorhat,

INTRODUCTION

Every civilization known to us has provided for the use of mind-altering substances. There are medicinal, recreational, religious and social uses for these substances. Each culture develops its own set of parameters norms and practices in order to control the use of these substances and to contain the extent of their abuse. Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs (1).

It is disturbing to know that, substance abuse has reached an alarming proportion in the recent years particularly among the young population (aged between 10-24 years) (2) as the habit of substance abuse is fast making inroads into their lives (3). The reason of fast growing abuse may be attributed to curiosity and natural tendency to experiment with drugs, disturbed home environment, lack of communication between parents and children, ignorance and its ill after effects, lack of knowledge, early exposure etc. Other important reasons contributing to it may be as a result of escape phenomena from tension and frustrations like unemployment, failure in exams, impact of 'disco culture', electronic media, peer pressure or delinquency.

According to ICD-10 (International Classification of Diseases), a medical classification list by WHO recognizes psychoactive substances as those, the self-administration of which produces mental and behavioural disorders (4). This may lead to abuse and subsequently addiction and dependence. The list includes alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, caffeine and other stimulating agents, hallucinogens, tobacco and other volatile substances.

The situation of substance abuse among young people is becoming a global health problem and has reached an alarming position in India.

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Research on the abuse of substances has grabbed undivided attention in developing countries like India because of changing trends in the prevalence of substance abuse and the rising magnitude of the menace. Statistically speaking, 2 billion worldwide populations consume alcoholic beverages as documented by WHO, out of which 76.3 million have disorders having suicidal tendencies. Other psychological changes include mood disorders like anxiety, depression, thought disorders, and personality disorders. Tobacco causes more death than all psychoactive substances combined, including 3 million premature deaths (6% of total) and 30% of all cancer deaths (5). Considering our area of study, the socio-cultural, economic, as well as geographical factors has proved to be very conducive for the emergence of drug addiction and alcoholism in this region. The region is close to the 'Golden Triangle', and a major hub of drug transport and the second-largest opium producer, provides an ample push in worsening the scenario. Opium, ganja, bhang, alcohol, khaini, bidi etc. are the most commonly abused substances. Coming back to Indian scenario, the Childline foundation survey in 2008 revealed 63% of patients coming with substance abuse-related disorders were introduced to it in their young age between 10 to 24 years. The cases of drug abuse are fast rising to 12% in age group upto 15 years and 32% in 16-25 years age group (6).

A thorough review of the published papers on this topic can define the causative factors and help to assess planning and suggest further studies in this domain.

In our project, the extent, pattern and trend of drug abuse amongst the young people aged between 10 to 24 years of Jorhat Slum, viz. Pujadubi and Dhakaipatty. Before commencing the study approval was taken from Institutional Ethics Committee of Jorhat Medical College and Hospital

MATERIAL and METHODS

Young People: The age of young people are taken to be between 10 to 24 years (2).

Substance abuse: In our study the substances considered were Alcohol, Cigarette, Tobacco products, Dendrite and Marijuana (Bhang).

Abuse: A substance was considered to be abused if it was used in an amount harmful to his/her health, either mentally or physically or both.

Scope of study: People of all age groups are seen to be suffering from the harmful effects of substance abuse. The age group included in our project, i.e., between 10 years to 24 years of age, is the major age group involved in such practices, commonly resulting in many physical, mental and social disturbances (7).

Data obtained from our research can be used to conduct educational programmes on substance abuse. We can provide the people information on how to deal with a family member or friend who is struggling with a substance use disorder, make them aware of the probable side effects and also advice them to avoid the use of such substances.

Limitations: Being undergraduates, with minimum resources and limited time, we could not afford a more extensive intervention into the matter. We could only provide our study

subjects with on the spot advices and information regarding substance abuse and its effects.

Objectives

1. To find out the substances abused and the factors contributing to it.
2. To suggest recommendations based on our study.

Literature review: According to the study named "Substance abuse among Youths at Guwahati city, ASSAM (India)-major instigators and socio demographic factors" by Himakshi Goswami conducted at Guwahati among 100 substance abused youth, the pattern reveals that 49% of the respondents use alcohol, 22% use heroin, 2% marijuana, 3% ganja, 2% inhalers, 19% polydrug and 3% cocaine. The pattern for the major instigators of substance abuse revealed that 29% used it for fun, 25% by peer influence, 23% reported that their curiosity for the drug acted as propagates and 9% used it to get relief from stress (8).

Research conducted on the extent and patterns of drug abuse by general population surveys in India showed that the prevalence of alcohol abuse varied between 4.2 and 30.7 %, heroin abuse between 0 and 1.3%, and other opiates between 0 and 10.2% in the country. Heroin abuse was frequently reported from Manipur and Kohima and was around 1%, raw opium abuse from Jodhpur and that of cannabis from Uttar Pradesh and Manipur (9).

According to the study "Developing Community Drug Rehabilitation, Rapid Assessment Study of Drug Abuse in Target Communities in India (RAS DATC)" by Mittal and Ch'ien, conducted in nine urban cities namely Bangalore, Chennai, Imphal, Jodhpur, Kolkata, Lucknow, Mumbai, Patna and Pune, it was reported that among a total of 1,271 drug users, commonly used drugs in descending order were: alcohol 43%, heroin 38.2%, opium 9.3%, cannabis 6.1% and other opiates 4.3% (10).

The National Household Survey of Drug Use in the country reported that alcohol was the primary substance used (apart from tobacco) followed by cannabis 3% and opioids 0.7% (11).

According to United Nations office on drug and crime, the states of India bordering Myanmar have experienced very rapid transmission of HIV among drug injecting populations. Zero prevalence among intravenous drug users increased from 0% to 50% within six months in 1989, injecting drug use for non medical purpose increased rapidly during the last decades and was a major contributing factor for various infective diseases like HIV in young generation (12).

In Manipur, Mizoram and Nagaland the anonymous surveys shows that the prevalence of intravenous drug users varies between 1 and 2% of the general population in the states concerned. Thus Manipur accommodates for at least 15,000 intravenous drug users in the entire state, Nagaland 1,500 and Mizoram 2,800 in surveyed urban areas. The intravenous injections are 0.2% in remote areas, 0.9% in areas far away from the highway and 1.3% in areas that are well connected with the highway. Heroin users are much higher in these areas (13).

According to the study, "Substance use among adolescent high school students in India: a survey of knowledge, attitude and opinion" conducted in two high schools in West Bengal, India, among 416 students in classes 8, 9 and 10, the results show that 52 (12.5%) used or abused any of the substance. 26 out of 172 were urban and the others 26 out of 244 were rural students. 73% of respondents expressed their desire to quit and 57.69% had tried to stop (12)

Study design and participants

In our project, a community based cross sectional study was carried out in urban slums of Jorhat (Pujadubi and Dhakaipatty) under the guidance of the Department of Community Medicine, Jorhat Medical College and Hospital, Jorhat. The study sample was selected from among young people (aged between 10 to 24 years of age) to study the substance abused along with the factors responsible for it. The project was completed within a period of four months from MAY to SEPTEMBER, 2017.

Preparatory phase: MAY - JUNE

Data collection: JULY - AUGUST

Report writing: AUGUST - SEPTEMBER

This age group was selected because substance abuse practices were found to be most common among this age group due to various reasons like peer pressure, familial pressure, stress, urge to experimentation, etc.

Sample size:

Based on all the details mentioned above the sample size was calculated using the equation (13).

$$n = 4pq/L^2 \text{ (15)}$$

Where: p is prevalence

q is non prevalence {1 – p}

L is the absolute error

RESULTS

Table 1: Gender distribution of substance abuse

Gender	Total number	In percentage
Male	153	87.99
Female	21	12.21
Total	174	100

Table 2: Prevalence according to age

Age Group (In Years)	Total Number	In Percentage
10-13	1	0.6
13-16	13	7.5
16-19	36	20.7
19-22	59	33.9
22-24	63	36.2
TOTAL	174	100

Taking, p = 12.5%

L = 10%

N = 174

And substituting in the above equation, we get 174 as the sample size.

Inclusion criteria:

All those abusing one substance or the other in the age group of 10 to 24 years.

Those who were willing to participate.

Those using multiple substance of abuse were also included

Exclusion criteria:

Those who did not report any instance of substance abuse till the date of survey.

Those who were not willing to participate.

Those aged below 10 years and above 24 years.

Study area and population

The study was conducted in the urban slums of Pujadubi and Dhakaipatty of Jorhat. It has a population mainly of daily wage workers and their families.

Simple random sampling technique was used for conducting our study. The slums were randomly selected from among the registered slums under Jorhat Development Authority. House to house visit was done in the two slums till 174 young people who reported of substance were reached.

Data collection tools: Informed consent was taken from the participants. They were assured of the confidentiality of the information given. Data was collected by using a pre-designed and pre-tested Performa by the INTERVIEW METHOD.

Table 3: Types of drugs abused in percentage

Drugs abused	Total number	In percentage
Dendrite	11	6.32
Marijuana and derivatives	8	4.60
Alcohol	47	27.01
Tobacco and derivatives	92	52.87
Marijuana+Alcohol+Tobacco and derivatives	8	4.6
Alcohol+Tobacco and derivatives	8	4.6
Total	174	100

Table 4: Frequency of drug intake:

Frequency	Total number	In percentage
Daily once	18	10.34
Daily multiple	110	63.21
Weekly	38	21.84
Monthly	8	04.61
Total	174	100

Table 5. Source of drug

Source	Total number	In percentage
Nearby retailer	112	64.36
Drug handler(outside persons)	9	5.17
Friend	11	6.32
Family	1	0.57
Retailer +friend	28	16.1
Retailer +drug handler	2	1.15
Retailer+family	11	6.32
Total	174	100

Table 6. Age at which first introduced:

Age	Total number	In percentage
10-16	60	34.48
17-24	114	65.52
Total	174	100

Table 7. The Mental state of the consumer after substance intake

Feelings/effect	Total number	In percentage
Euphoric	26	14.94
Hallucination	13	7.47
Relaxed	45	25.86
Depressed	3	1.72
Addictiveness	17	9.77
Euphoric+relaxed+addictiveness	23	13.21
Relaxed+depressed	4	2.29
Euphoric+hallucination+addictiveness	43	24.71
Total	174	100

Table 8. The health effects of substance use on consumer's work

Effect	Total number	In percentage
Respiratory	26	14.94
G.i	20	11.49
Oral	38	21.83
Cns	6	3.44
Unable to concentrate +loss of work efficacy	34	19.54
Unable to concentrate +absence from work	20	11.49
Loss of work efficacy	21	11.5
No health effects seen	9	5.17
Total	174	100

Table 8. The health effects of substance use on consumer's work:

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Respiratory	26	14.94
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Unable to concentrate +loss of work efficacy	34	19.54
Unable to concentrate +absence from work	20	11.49
Loss of work efficacy	21	11.5
No health effects seen	9	5.17
Total	174	100

Table 9. Reasons for taking drugs:

Reasons	Total number	In percentage
Depression	16	9.19
Stress	14	8.04
Personal loss	9	5.17
Peer pressure	83	47.70
Experimentation	33	18.96
Experimentation + peer pressure	6	3.44
Stress + personal loss	1	0.57
Total	174	100

Table 10. Household factors contributing to drug abuse:

Household scenario	Total number	In percentage
Parental violence	33	18.96
Lower socioeconomic condition	44	25.28
Lack of guidance	40	22.98
Lack of bonding	28	16.09
Abused /battered	13	7.47
Neglected	16	9.19
Total	174	100

Table 11. Family history of drug abuse

Family history	Total number	Percentage
Present	76	43.68
Not present	98	56.32

Table 12. Family approach towards the drug abuser:

Attitude and measures	Total number	Percentage
Unaware	88	50.57
Aware but indifferent	50	28.73
Aware and advised	36	20.68

Table 13. Awareness of ill effects

Status	Total number	In percentage
Aware	126	72.41
Not aware	48	27.59
Total	174	100

DISCUSSION

What we have observed at the end of this study is quite remarkable. We have come to a conclusive fact that a very large proportion of the young age group is abusing one kind of drug or another.

We found that 87.99% of males and 12.21% females (**Table1**) were abusing one kind of drug or another in our study while in another study entitled "Drug abuse in slum population" conducted in 2014 in Indore Madhya Pradesh(India) by the department of psychiatry MGM

Medical College Indore 78.2% were males and 28.2% were females. Thus indicating that males have a higher tendency towards vehement consumption of drugs (14).

The majority of drug abusers i.e. 36.2% belonged to age group 22-24 followed by 33.9% in the age group of 19-21% (**Table 2**). However, in the study "Prevalence, pattern and familial effects of substance use among the male college students – North Indian Study" by Sorab Gupta the majority i.e. 60% belonged to the age group 19-21 followed by 39.4% in the age group 22-25. Though statistics may vary somewhat in both studies it is seen that young people in the age group 19-25 are most vulnerable (15).

The major drugs abused are tobacco (52.87%) and alcohol (27.01%). The study "Age of substance use initiation among treatment admissions aged 18-30" by Substance Abuse and Mental Health Services Administration (SAMHSA) U.S.A. also revealed that the majorly abused drugs were tobacco (53.8%) and alcohol (19.7%) (18).

73.55% individuals take drugs daily and 21.84% weekly. However the study by Sorab Gupta reveals 49% take drugs daily and 23.8% weekly (18)

The most common source of drug were nearby retailers (64.36%). Also friends in 6.32% cases, drug handlers in 5.17% cases and 23.57% got their drugs from more than 1 source.

The most common reason as concluded was peer pressure (47.5%) by our study. Experimentation stood next at 18.96%. The study "Factors influencing alcohol and tobacco addiction among patients attending de addiction centre of south India" conducted by P. Prabhu and her associates also revealed that the most common reason (41.5%) for getting into drugs was peer influence or peer pressure (17).

Most of the abusers i.e. 65.52% were introduced to drugs in the age group 17-24 years and 34.48% in the age group 10-16 years while in the study "Age of substance use initiation among treatment admissions aged 18-30" by Substance Abuse and Mental Health Services Administration (SAMHSA) U.S.A. majority i.e. 38.6% were introduced to drugs when they were 11 or younger (17) which is understandable as the U.S. is a developed country with easier access to drugs.

It was found that most abusers were into drugs because it provided them with calmness and relaxation feeling (25.86%) followed by euphoria (14.96%). 8.7% of the total seem addicted.

According to our study a number of health effects were seen such as oral problems (21.83%), respiratory problems (14.94%), gastrointestinal troubles (11.49%) and also nervous disorders (3.44%). One of the most significant finding was loss of work efficacy (17.4%); 13.37% of the people also reported absence from school and work. The study "Assessment of causes, prevalence and consequences of alcohol and drug abuse among Mekelle University, CSSL 2nd year students" conducted by Dept. of Psychiatry Mekelle University, Ethiopia revealed that 90% of the subjects had academic consequences, 75% had psychological consequences, 70% had health consequences, 80% had behavioral consequences of drug abuse (19). However the

data isn't quite reliable as it is a study conducted in another country with different parameters.

The household factors for drug abuse was found to be financial crisis (25.28%) followed by lack of guidance (22.98%) and household violence (18.96%). However the research by Journal of Pakistan Medical Association shows that family has little or no influence (0.5%) in drug abuse, 8% were due to peer pressure, 6% were due to employment issues, 5% were related to problems with spouse.

43.68% had positive family history of drug use as revealed by our study. The study by Sorab Gupta reveals 57.4% individuals with positive family history of drug use. Thus there seems to be a greater tendency of drug abuse in persons with positive family history.

51.6% of the abusers revealed that their families were unaware of the fact, 22.6% revealed that their families were aware but indifferent, 15.6% had been sent to counselling by family and 10.46% were sent for rehabilitation. The study "Substance use and addiction research in India" by Pratima Murthy, N. Manjunatha and Vivek Benegal throws light upon the results obtained after a 5 year treatment and rehabilitation period of 800 drug addicts at a de addiction centre which is as follows:

- 3% i.e. 504 persons did not use the services provided beyond 1 month
- 81% of the remaining i.e. 240 persons of 296 were successful in maintaining abstinence.
- Upon further study it was found that the successful de addiction cases were constantly receiving support from family and friends (20)

6.33% individuals have stopped drug intake while 93.67% continue to abuse drugs, 72.41% are aware of the ill effects of drugs. However the study by Sorab Gupta reveals 100% of the abusers still are active into drugs, 97.3% are aware of the ill effects.

Summary

On the basis of our project on 'A study on Substance abuse among young people of age group 10-24 years' in the urban slums of Jorhat Assam' on 174 individuals, it was found that

-87.99% Males and 12.21% Females were abusing one kind of substance or the other.

-Among the 174 respondents, 36.2% belongs to age group 22-24 years, 33.9% of 19-21 years, 20.7 % belongs to 16-18 years, 7.56 % belongs to age group 13-15 , 0.58% belongs to age group 10-12 years.

-The substances abused were tobacco by 52.87% abusers, alcohol by 27.01% abusers, and marijuana by 4.60 % abusers, Dendrite by 6.32% while 9.2 % consume combination of two or more drugs.

-Substance abuse is done on a daily basis by 73.55% individuals and on weekly basis by 21.84% individuals and monthly basis by 4.61% individuals.

-The common sources of substance abuse were nearby retailer in 64.36% individuals, drug handler in 5.17%, friends in

6.32%, family in 0.57% and 23.57 % due to combination of two or more sources

-Out of 174 respondents, 34.48% individuals started substance abuse at the age of 10-16 years and 65.52 % started substance abuse at the age of 17-24 years.

-Out of 174 respondents, substance abuse has produced effects like calm and relaxed feeling in 25.86%, euphoria in 14.96%, and hallucination in 7.47% and depression in 1.72 % abusers.

-Out of 174 respondents, health effects were seen like oral problems in 21.83 %, respiratory problems in 14.94%, and gastrointestinal problems in 11.49% and nervous disorders in 3.44 % individuals.

-The common reasons for substance abuse was found to be peer pressure in 47.5%, followed by experimentation in 18.96%, stress in 8.04%, personal loss in 5.17%, depression in 9.19% and in 4.01 % due to two or more of above reasons.

-The household factors responsible for substance abuse are found to be lower socio economic status in 25.28% abusers, lack of guidance in 22.98% and household violence in 18.96% individuals, negligence in 9.19% individuals.

-Out of 174 respondents, 43.68% has family history of substance abuse and 56.32% has no family history of substance abuse.

-Among the substance abusers, 51.6% them revealed that their families were unaware of the fact, 22.6% revealed that their families were aware but indifferent, 15.6% were sent for counselling and 10.46 % were sent for rehabilitation.

- Out of 174 respondents, 72.41% are aware of ill-effects of substance abuse while 27.59% are unaware of ill-effects.

CONCLUSION

As the problem of substance abuse is increasing worldwide, and has in the recent years become a global problem also affecting our country, we tried to find out the trends of substance abuse, i.e. their sources, contributing factors, household environments leading to substance abuse, etc. among 174 young people from Urban slums of Jorhat, Assam. Based on our study, we came to the following conclusions-

Majority of the respondents were males. Among the substance abusers, majority of them belonged to age group of 22-24 years, followed by the age group of 19-21 years. The major drug abused was found to be tobacco, followed by alcohol. For majority of people the source of obtaining drug is from nearby retailers. It was also found that most abusers were into drugs because it provided them with a calm and relaxed feeling followed by euphoria and addiction. A number of health effects were seen among the substance abusers with majority having oral problems and/or respiratory problems. Majority of the abusers were introduced to drugs at the age of 17-24 years that is in school going period. Also, study of the frequency of substance abuse revealed that majority of them take the drugs on a daily basis, while some consume it weekly or monthly. The most common reason for getting into substance abuse was found to be peer influence or peer pressure. It is followed by experimentation. The leading household factor contributing to drug abuse was found to be due to lower socioeconomic status followed by lack of guidance and household violence. A large number of the

subjects were aware of the ill effects of substance abuse while the rest were unaware.

Recommendations

- Based on our study it was found out that many people were unaware of the ill effects of substance abuse. Under such circumstances, the creating awareness primarily focussing on these unaware groups, is utmost required as a viable solution.
- Making people aware of the hamper it does on one's day to day work, leading to a reduction in human efficiency and productivity could make them help in doing away with substance abuse.
- Advices was given to this group of people. There should be counselling calls for moral boosting and it should be explained not to abuse substance to escape problems.
- General advises on good health and adverse effects that substance abuse imparts on one's health should be done by organising health camps, mass gatherings etc.
- Seeking help from rehabilitation centres should be encouraged.
- The dangers of long term ill effects were explained.

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REFERENCES

1. World Health Organization. Guide to drug abuse: epidemiology. No. WHO/MSD/MSB/00.3. World Health Organization, 2000.
2. Government of India. "National Youth Policy 2014." 2014.
3. PARK'S, K., et al. Park's text book of preventive and social medicine. 2021.
4. DADWANI, Roma S.; THOMAS, Tintu. Prevalence of substance abuse: a community based study. International journal of community medicine and public health (Gujarat), 2016, 3.3: 647-650.
5. Drug abuse project, North Eastern Hill University; Problem of Drug Addiction in North east Regions
6. World Bank. World development report 2015: Governance and the law. The World Bank, 2015.

7. Katoki, Kaushik, Srabana Misra Bhagabaty, and Manoj Kalita. "Silhouette of substance abuse amongst an adolescent sample group from urban slums of Guwahati metro, North East India." *International Journal of Medical Research & Health Sciences* 5.3 (2016): 1-8.
8. Goswami, Himakshi. "Substance abuse among youths at Guwahati City, Assam (India): Major Instigator and Socio-demographic Factors." *Int Educ Res J* 1 (2015): 39-42.
9. Ambwani SR, Kaur R. Impact of oral cannabis consumption on health: A cross-sectional study. *Journal of Pharmacology and Pharmacotherapeutics*. 2021 Apr 1;12(2):91.
10. Murthy P, Manjunatha N, Subodh BN, Chand PK, Benegal V. Substance use and addiction research in India. *Indian journal of psychiatry*. 2010 Jan;52(Suppl1):S189.
11. Nadeem A, Rubeena B, Agarwal VK, Piyush K. Substance abuse in India. *Pravara Med Rev*. 2009;4(1):4-6.
12. Tsering D, Pal R, Dasgupta A. Substance use among adolescent high school students in India: A survey of knowledge, attitude, and opinion. *Journal of Pharmacy and Bioallied Sciences*. 2010 Apr;2(2):137.
13. K. Park; *Health Information and Basic Medical Statistics*: 23rd edition
14. Ghulam R, Verma K, Sharma P, Razdan M, Razdan RA. Drug abuse in slum population. *Indian journal of psychiatry*. 2016 Jan;58(1):83.
15. Gupta S, Sarpal SS, Kumar D, Kaur T, Arora S. Prevalence, pattern and familial effects of substance use among the male college students—a North Indian study. *Journal of clinical and diagnostic research: JCDR*. 2013 Aug;7(8):1632.
16. Prabhu P, Srinivas R, Vishwanathan K, Raavi A. Factors influencing alcohol and tobacco addiction among patients attending a de-addiction Centre, South India. *Journal of International Society of Preventive & Community Dentistry*. 2014 May;4(2):103.
17. Abuse S. *Mental Health Services Administration*. Results from the. 2013 Jan 10;2:013.
18. Tulu SK, Keski W. Assessment of causes, prevalence and consequences of alcohol and drug abuse among Mekelle university, CSSL 2nd year students. *American Journal of Applied Psychology*. 2015;3(3):47-56.
19. Murthy P, Manjunatha N, Subodh BN, Chand PK, Benegal V. Substance use and addiction research in India. *Indian journal of psychiatry*. 2010 Jan;52(Suppl1):S189.