

ORIGINAL ARTICLE

Prevalence and Pattern of Substance Abuse among 18 to 60 years Male in a Rural Area of District Etawah, Uttar Pradesh

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Abstract

Abstract: Adolescent and young people's behavior is of major concern due to Substance abuse. According to WHO, Substance abuse is consistently or sporadic drug use inconsistent with or unrelated to acceptable medical practice. Globally, alcohol and tobacco as a risk factors cause 4.0% and 4.1% of the overall burden of disability respectively. **Objective:** To determine the prevalence of substance abuse among 18 to 60 years' male in rural Etawah and to identify type and pattern of substance abuse. **Material and Methods:** It was a community based cross sectional study carried out in five block of district Etawah for a period of one and half year. 1500 participants were interviewed using pre designed pre-tested questionnaire and data regarding socio demographic profile and pattern of abuse were collected. Data was entered in Microsoft excel sheet and analyzed by SPSS version 24 using appropriate statistical test. **Result:** Among 1500 participants, majority were below 30 years of age (i.e. 42.8%). In this study prevalence of Substance use among was 47% [707/1500]. Among all the other substance use, smokeless tobacco showed highest prevalence. **Conclusion:** Substance use is common in both urban as well as in rural area. So there is a need to educate and aware people regarding bad effects of drug abuse.

Keywords

Substance Abuse; Tobacco Use; Alcohol Use

Introduction

Adolescent and young people's behaviour is of major concern due to Substance abuse. According to WHO, Substance abuse is consistently or sporadic drug use inconsistent with or unrelated to acceptable medical practice.(1) It is seen that drug abuse and drug dependence is showing an increasing trend which is an important health problem throughout the world including India. As per WHO report 2002, Tobacco and Alcohol use were among the 10 leading risk factors for the global burden of disease measured in DALYs. 4.2% of the global population aged 15 and over used illicit drugs, causing

0.8% of the total burden of disability.(2) Globally, alcohol and tobacco as risk factors cause 4.0% and 4.1% of the total burden of disability respectively.(3) In India tobacco attributable mortality is estimated to increase from 1% of total mortality in 1990 to 13% by 2020.(4) The vulnerable groups like child labourers, street children, those with family history of substance use and those with emotional and behavioural problems are at particularly higher risk.(5) Alcohol, Tobacco, Cannabis and heroin are most frequently use substance in India. According to Global Adults Tobacco survey (GATS) India (2016-2017), current tobacco user in any form are 28.6%, current users of smokeless tobacco are 21.4% and current tobacco

smokers are 10.7% in adult's male.(6) In 2004, United Nations office on Drug and Crime (UNODC) conducted a survey titled "Extent, Pattern and Trends of Drug Abuse in India-National Survey" in which they reported that India has two million opiate-users, 8.7 million cannabis- and 62.5 million alcohol users among whom 17 to 20% were dependent users.(7) Prevalence rate of substance abuse in India is reported in different states such as in slum population of Madhya Pradesh is 560 per 1000 populations (56%).(8) According to national survey (2015) on drug use and health: trends in prevalence of alcohol for ages 12 to 17, ages 18 to 25 and ages 26 or older, was 28.40%, 82.40%, 87.10% respectively.(9) In a rural population of Uttar Pradesh alcohol is found to be the commonest substance of abuse.(10)

Socio-economic status is also a determinants of the types of substance abused with lower classes showed a preference for alcohol and tobacco, as these are cheap and easily available while opium are favoured by the higher class.(11) Parents have a tremendous influence on their children and the children of smoker parents are twice likely to become smokers.(12) Parental disapproval of smoking makes an adolescent less likely to initiate smoking.(13) The children are also more likely to smoke whose elder siblings are smokers.(14) So it can be said that many cultural, behavioural and psychological variables interact in the development of substance abuse disorder.(15)

Substance abuse is a common problem and it has a major impact at individual, as well as family. So it is important to assess the magnitude of Substance abuse and its effect. There seems to be little work in this region of Uttar Pradesh. So the present study was chosen.

Aims & Objectives

1. To determine the prevalence of substance, abuse among 18 to 60 years-' males in rural Etawah
2. To identify the type and pattern of substance abuse.

Material & Methods

It was a community based cross sectional study carried out in district Etawah from January 2017 to June 2018. The necessary ethical approval was sought from the university (letter number 241, Uttar Pradesh university of medical sciences Saifai, Etawah) ethical committee. Out of the eight community development blocks of district Etawah, five blocks were selected randomly. A list of all the villages was made and then again three villages from each block were randomly selected. Thus a total of fifteen villages were selected randomly. For the present study by considering the prevalence of 18.86 3 and 2% absolute error, the total sample size came out to be 1469. So for the study purpose, a total of 1500 subjects were interviewed from the rural population of district Etawah. Therefore, we have recruited 100 participants from one village. If the person is not doing any Substance abuse no further question was asked from him regarding the study.

A Predesigned and pretested questionnaire was used to elicit information regarding Age, gender, education, occupation, family details, and types and pattern of substance abuse. A pilot study was conducted among 50 participants and preliminary analysis has been done, necessary modifications required have been done in the schedule before starting the actual study. Data were entered in Microsoft excel sheet and analysed by SPSS version 23 using appropriate statistical test (chi-square test).

In this study those persons deliberately using drug for non-medical purposes, as well as the arbitrary use without medical prescription.were drug abusers. For the purpose of the study, they included smokeless tobacco, smoked tobacco, alcohol, Cannabis, cocaine, heroin, and others (like pethidine, barbiturates, glue, ecstasy, valium, amphetamine and other common drugs in the locality). Use and abuse has been used synonymously in this study.

Results

Out of the 1500 study participants, 707 (47%) were indulged in any form of substance abuse (Table 1). Among 1500 participants, the majority were between 18-30 years of age (42.9%). In this study mean age to initiate substance use was 21.2 ± 6.3 years (mean \pm SD). The majority of substance abusers belonged to 31 to 40 years of age (29.1%). There were significant relations between substance abuse with age group ($p=0.0001$). The maximum numbers of substance users (92.2%) were Hindu by religion, 74.2% were married and 24.0% were unmarried but It was observed that participants who were married (74.2%), indulged more in substance abuse i.e. 83.9% than unmarried persons (13.4%) and this difference was statistically significant($p=0.0001$).

Out of 707cases, majority were living in joint family i.e.52.7%, followed by nuclear family i.e. 44.4% but this relation was found to be non-significant ($p=0.269$). Similarly, majority (41.7%) of cases were from lower middle class of socioeconomic status, followed by lower class i.e. 39.9% and here relation between substance abuse and socioeconomic status of participants were statistically significant ($p<0.05$) (Table.1). Among all substances abuser, smokeless tobacco (29.7%) showed highest prevalence followed by smoking tobacco (20.4%), alcohol (15.2%) and cannabis (1.2%). In our study, majority of smokeless tobacco users were in an age group 31-40 year of age group (i.e. 33.2%), followed by 18-30 year of age group. So the overall prevalence of smoking tobacco was 20.4% and for smokeless tobacco, it was 29.7%. Similarly, for alcohol it was 15.2% and for cannabis (charas, bhang, ganja), it was 1.5%. So the most common substance abuse by rural population of my study area was smokeless tobacco (Table 2)

Similarly, 75% of the participants used smokeless tobacco on daily bases, 20.0% used it weekly, 4% used on monthly basis and 1.0% used it occasionally (Table 3). Among

substance abusers' the majority were taking substances in a group (46%), followed by individually (36%), and along with family (18%) (Figure 1). In this study, majority of participant's initiate tobacco smoking at the age of 15 to 20 year of age (44.0%). Majority of participant's initiate smokeless tobacco at the age of 15 to 20 year of age (52.0%). Similarly, majority of participant's initiate alcohol at the age of 20 to 30 year of age (45.4%). Most of the participant's initiate cannabis at the age of <15 year. (75.0%). (Table 4) In this study mean age of substance use was 21.2 ± 6.3 year (mean \pm SD).

Discussion

In present study, the overall prevalence of substance abuse was found to be 47 %, which was lower than the study conducted by Ghulam R et al. (16) (56%) and higher than the studies conducted by Niranjan et al. (17) (39%), meena et al. (18) (19.86%) and dadwani et al.(3) (18.86%). Smokeless Tobacco consumption was the most common substance abuse observed in our study i.e. 29.7%. followed by tobacco smoking (20.4 %), alcohol (15.2%), and cannabis (1.5%). Compared to present study, NHS reported high prevalence for tobacco (55.8%). In present study we found that among other substances, cannabis (2%) are least abused substance. Similarly, Kumar et al (19) also reported 1.2% for cannabis, 30.2% prevalence for smokeless tobacco, 9.1% for tobacco smoking and 4.2% for alcohol. Dadwani et al. (3) was reported higher prevalence of tobacco (38.34%) and alcohol (34.0%) abuse but for cannabis abusers approximate similar pattern (1.0%) seen as shown in our study (1.5%).

In our study, majority of smokers were from 41-50 year of age group (29.4%), followed by 31-40 year of age group (28.8%) and Minimum number of smokers were from 51-60 year of age group (17.3%). Similarly, majority of smokeless tobacco users were from 31-40 year of age group (33.2%) followed by 18-30 year of age group (31.2%) and minimum number of smokeless tobacco users were from 51-60 year of age group (11.2%). Among alcohol users' majority were from 31-40 year of age group (33.8%). Similarly, among cannabis users' majority were from age group 31-40 year of age group (27.3).

In this study mean age to initiate substance use was 21.2 ± 6.3 year (mean \pm SD). Similar finding was also reported by Dadwani et al. (3) i.e. mean age of initiate for drugs use was 26.9 ± 13.4 years.

In our study among smoking tobacco, smokeless tobacco and alcohol users majority were abuse on daily basis i.e. 86%, 75%, and 43% respectively. But among cannabis users, majority were abuse occasionally (50%). A study conducted by Birega et al.(20) demonstrates that majority of participants abuse substance 3 to 4 times a week.

Conclusion

This study revealed that in spite of having strict legislation for prohibition of substance and various awareness activities by various organization, people are still abusing

tobacco, alcohol and cannabis etc. The present study shows increased prevalence of substance abuse among rural population in Etawah district (47.1%). Our study finding showing that most of the substance abuse have used smokeless tobacco. Majority of substance abusers were from age group 31 to 40 year and overall mean age to was 21.2 ± 6.3 year (mean \pm SD). Majority initiate the use of alcohol at 20 to 30 years of age, whereas both smoking and smokeless tobacco initiate at 15 to 20 year of age, and cannabis initiate at less than 15 year of age.

Recommendation

Despite the warning note, usage of gutka, bidi, alcohol and other substances are common in India. Awareness and campaign activities need to be strengthen to stop the consumption. Adolescent should be specially targeted, who may be the future substance abusers. Prevention programs can help control substance abuse in rural populations, particularly when focused on young populations. Counsellors, healthcare professionals, teachers, parents should work together to identify problems and develop prevention strategies to control drug abuse in rural population. Routine screening, holding meetings to raise awareness of this issue, law enforcement regarding license compliance, and detection of impaired drivers. There is a need to counsel and educate people about harmful effects of Substance use.

Limitation of the study

Present study is based on interview of the participants, so misreporting due to recall bias could not be ruled out.

Relevance of the study

Substance abuse are also major public health problem in emerging cities like Etawah

Authors Contribution

JM, KN, PK, KK, PKJ: contributed in planning and writing manuscript, JM: Data collection. KN: Literature search. JM, KK: Analysis of data. PK, PKJ, AG: Supervised and reviewed study.

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Tables

TABLE 1 ASSOCIATION OF SUBSTANCE ABUSE WITH DIFFERENT SOCIO-DEMOGRAPHIC CHARACTERISTICS

| S. No | Socio-demographic indices | Current use of Substance | | | P value | |
|------------------------|---------------------------|-----------------------------------|-----------|-----------|------------|------------------------|
| | | Yes | No | Total | | |
| 1 | Age | 18-30 | 207(29.3) | 436(55.0) | 643(42.9) | <i>p-value =0.0001</i> |
| | | 31-40 | 206(29.1) | 129(16.3) | 335(22.3) | |
| | | 41-50 | 174(24.6) | 141(17.8) | 315(21.0) | |
| | | 51-60 | 120(17.0) | 87(11.0) | 207(13.8) | |
| | | Total | 707(100) | 793(100) | 1500(100) | |
| 2 | Religion | Hindu | 652(92.2) | 700(88.3) | 1352(90.1) | <i>p-value =0.010</i> |
| | | Muslim & Others | 55(7.8) | 93(11.7) | 148(9.9) | |
| | | Total | 707(100) | 793(100) | 1500(100) | |
| 3 | Marital Status | Unmarried | 95(13.4) | 265(33.4) | 360(24.0) | <i>p-value =0.0001</i> |
| | | Married | 593(83.9) | 520(65.6) | 1113(74.2) | |
| | | Others(Widower/separated/divorce) | 19(2.7) | 8(1.0) | 27(1.8) | |
| | | Total | 707(100) | 793(100) | 1500(100) | |
| 4 | Type of family | Nuclear | 314(44.4) | 380(47.9) | 694(46.2) | <i>p-value =0.269</i> |
| | | Joint | 373(52.7) | 386(48.6) | 759(50.6) | |
| | | Three Generation | 20(2.8) | 27(3.4) | 47(3.1) | |
| | | Total | 707(100) | 793(100) | 1500(100) | |
| 5 | Family members | 1-4 | 181(25.6) | 193(24.3) | 374(24.9) | <i>P-value =0.001</i> |
| | | 5-8 | 365(51.6) | 474(59.8) | 839(55.9) | |
| | | 9-12 | 120(17.0) | 84(10.6) | 204(13.6) | |
| | | >12 | 41(5.8) | 42(5.3) | 83(5.5) | |
| | | Total | 707(100) | 793(100) | 1500(100) | |
| 6 | Socioeconomic status | Upper | 16(2.3) | 33(4.2) | 49(3.3) | <i>p-value=0.001</i> |
| | | upper-middle | 37(5.2) | 44(5.5) | 81(5.4) | |
| | | Middle | 77(10.9) | 93(11.7) | 170(11.3) | |
| | | Lower middle | 295(41.7) | 383(48.3) | 678(45.2) | |
| | | Lower | 282(39.9) | 240(30.3) | 522(34.8) | |
| | | Total | 707(100) | 793(100) | 1500(100) | |
| 7 | Education | Illiterate | 106(15.0) | 81(10.2) | 187(12.5) | <i>*p value=0.0001</i> |
| | | just literate | 55(7.8) | 45(5.7) | 100(6.7) | |
| | | Less than primary education | 298(42.1) | 203(25.6) | 501(33.4) | |
| | | Primary education completed | 91(12.9) | 151(19.0) | 242(16.1) | |
| | | Secondary education completed | 97(13.7) | 90(11.3) | 187(12.5) | |
| | | High school completed | 46(6.5) | 34(4.3) | 80(5.3) | |
| Intermediate completed | 8(1.1) | 156(19.7) | 164(10.9) | | | |

| S. No | Socio-demographic indices | Current use of Substance | | | P value | |
|-------|---------------------------|------------------------------------|-----------|-----------|-----------|-----------------|
| | | Yes | No | Total | | |
| 8 | Occupation | Graduate/postgraduate/professional | 6(0.8) | 33(4.2) | 39(2.6) | *p value=0.0001 |
| | | Total | 707(100) | 793(100) | 1500(100) | |
| | | Unemployed | 88(12.4) | 187(23.6) | 275(18.3) | |
| | | Unskilled | 250(35.4) | 228(28.8) | 478(31.9) | |
| | | Skilled | 59(8.3) | 96(12.1) | 155(10.3) | |
| | | Clerk/Shopkeeper/Businessperson | 92(13.0) | 108(13.6) | 200(13.3) | |
| | | Farmer | 188(26.6) | 144(18.2) | 332(22.1) | |
| | | Semiprofessional /Professional | 14(2.0) | 25(3.2) | 39(2.6) | |
| | | Others(retired/pension) | 16(2.3) | 5(0.6) | 21(1.4) | |
| Total | 707(100) | 793(100) | 1500(100) | | | |

TABLE 2 DIFFERENT TYPES OF SUBSTANCE ABUSE WITH AGE GROUP (N=707, MULTIPLE RESPONSES)

| S. No. | Age groups (years) | Substance Users | | | | | | | |
|------------------------------|--------------------|---------------------------------------|-----------|---------------------------------------|-----------|---------------------------------------|-----------|-----------------------------------|-----------|
| | | Smoking Tobacco | | Smokeless tobacco | | Alcohol | | Cannabis | |
| | | Yes N(%) | No N(%) | Yes N(%) | No N(%) | Yes N(%) | No N(%) | Yes N(%) | No N(%) |
| 1. | 18-30 | 75(24.5) | 568(47.5) | 139(31.2) | 504(47.8) | 56(24.5) | 587(14.7) | 5(22.7) | 638(43) |
| 2. | 31-40 | 88(28.8) | 247(20.6) | 148(33.2) | 187(17.7) | 77(33.8) | 258(20.3) | 6(27.3) | 329(22) |
| 3. | 41-50 | 90(29.4) | 225(18.8) | 109(24.4) | 206(19.5) | 44(19.3) | 271(21.3) | 4(18.2) | 311(21) |
| 4. | 51-60 | 53(17.3) | 154(12.8) | 50(11.2) | 157(14.8) | 51(22.4) | 156(12.3) | 7(31.8) | 200(13.5) |
| Total | | 306(100) | 1194(100) | 446(100) | 1054(100) | 228(100) | 1272(100) | 22(100) | 1478(100) |
| χ² P Value | | χ ² =53.7 P value=<0.00001 | | χ ² =60.5 P Value=<0.00001 | | χ ² =51.4 P Value=<0.00001 | | χ ² =7.7 P Value=0.052 | |

TABLE 3 DIFFERENT TYPE OF SUBSTANCE ABUSE BY STUDY PARTICIPANTS (N=707, MULTIPLE RESPONSES,)

| S. No. | Frequency | Smoking Tobacco | | Smokeless tobacco | | Alcohol | | Cannabis | |
|----------------------------|--------------|--|-----------|--|-----------|---|--|---|--|
| | | N=306 | | N=446 | | N=228 | | N=22 | |
| 1 | Daily | Yes | 264(86) | 335(75) | 98(42.9) | 1(4.5) | | | |
| | | No | 42(13.7) | 111(24.8) | 130(57) | 21(95.4) | | | |
| 2 | Weekly | Yes | 32(10.4) | 90(20) | 47(20.6) | 3(13.6) | | | |
| | | No | 274(89.5) | 356(79.8) | 181(79.4) | 19(86.4) | | | |
| 3 | Monthly | Yes | 6(1.9) | 19(4.3) | 45(19.7) | 7(36) | | | |
| | | No | 300(98) | 427(95.7) | 183(80.2) | 15(68) | | | |
| 4 | Occasionally | Yes | 4(1.3) | 2(0.45) | 38(16.6) | 11(50) | | | |
| | | No | 302(98.7) | 444(99.5) | 190(83.3) | 11(50) | | | |
| χ²PValue | | χ ² =825.5 P Value<0.00001 | | χ ² =848.5 P Value<0.00001 | | χ ² =53.5 P Value<0.00001 | | χ ² =14.3 P Value=0.00252 | |

TABLE 4 MEAN AGE TO INITIATE SUBSTANCE USE (N=707)

| Substance | Age (year) | | | | | |
|--------------------------|------------|------------|-----------|----------|---------|----------|
| | <15 | 15-20 | 20-30 | 30-40 | >40 | Total |
| Smoking tobacco | 58(25.2) | 101(44.0) | 67(29.1) | 3(1.3) | 1(0.4) | 230(100) |
| Smokeless tobacco | 58(18.2) | 167(52.0) | 75(23.3) | 17(5.3) | 4(1.2) | 321(100) |
| Alcohol | 20(13.1) | 50(32.9) | 69(45.4) | 13(8.6) | 0(0.0) | 152(100) |
| Cannabis | 3(75.0) | 1(25.0) | 0(0.0) | 0(0.0) | 0(0.0) | 4(100) |
| Total | 139(19.6) | 319(45.0) | 211(29.8) | 33(4.6) | 5(1.0) | 707(100) |

Figures

FIGURE 1 SUBSTANCE TAKEN IN A GROUP, INDIVIDUALLY, OR ALONG WITH FAMILY (MLTIPLE RESPONSES)

