

Medical Needs of Different Age Groups of Substance Dependent Subjects: A Cross-sectional Study

Pradeep Kumar Yadav, Nitesh Kumar Singh and Mona Srivastava*

Department of Psychiatry, Institute of Medical Sciences - Banaras Hindu University (IMS BHU),
Varanasi – 221005, Uttar Pradesh, India; drmonasrivastava@gmail.com

Abstract

Background: There are several bio-psychological and social factors contributing to substance abuse. These factors could differ in different age groups. This study provides important information regarding different Psychosocial factors in different age groups contributing to substance abuse which would help in planning better psychosocial intervention fitting to specific age groups. **Objective:** This was cross-sectional study comparing socio-demographic characters among treatment seeking substance abuse patients to find out any correlates between substance abuse and sociodemographic factors across different age groups. **Methods:** All patients with SUD and without any comorbid physical or mental illness were included in the study. Patients were divided into three groups based on age group, each group consist of 30 participants and were applied DAST, SDS, CPC, SDS & AUDIT and applying using SPSS software. **Results:** In Young adult prevalence of Tobacco-93.3%, Alcohol-56.6%, Cannabis-20%, Opioid-20%, Benzodiazepine-6.6%, Polysubstance-83.3% in Middle age-prevalence of Tobacco-96%, Alcohol-76.6%, Cannabis-16.6%, Opioid-16.6%, Benzodiazepine-10%, Polysubstance-96.6% in Elderly age- prevalence of Tobacco-96%, Alcohol-23.6%, Benzodiazepine-6.6%, Polysubstance-23.3%. **Discussion:** Our study showed tobacco is most commonly used substance followed by alcohol followed by cannabis and other substances. Prevalence of alcohol and illicit drugs use decrease with increasing of age. **Conclusion:** The present study shows that the commonest substance of abuse is tobacco and this is also the gateway substance of abuse, so legal and awareness methods should be adopted to limit its abuse.

Keywords: Socio-demographic Characters, AUDIT, DAST, SDS, SUD

1. Introduction

Substance use disorders have been recognized as a major public health problem globally including India. Substance abuse has emerged as a serious concern, adversely affecting the physical, mental and socio-economic well-being. The processes of industrialization, urbanization and migration have led to change in our social structure and loosening of the traditional methods of social control have rendered individual vulnerable to the stresses and strains of modern life. Substance abuse is a complex medico-social problem, which has various social, cultural, biological, geographical, historical and economic aspects. Psychoactive substance use has typically been associated with onset during late adolescence or early adulthood¹. While adolescents and

young adults constitute substantial proportion of the current substance users, the consequences of use during these years continue to impact the middle age and later years of life. Various complications related to use of psychoactive substances are likely to impact individuals in middle years of life². Nation-wide survey on psychoactive substance use in India, has found around 70% of current users to be aged 40 years or less³. Those in middle years of life and elderly population constituted the remainder of 30% of current users. Consequently, adolescents and young adults continue to remain the focus of attention with regards to substance use related problems⁴. There has been a limited focus on illicit substance use among middle aged and elderly population^{5,6}.

*Author for correspondence

Substance use and mental illness can lead to significant disability adjusted life years (DALY) and the awareness regarding mental illness is also poor in this part of the country; hence for proper management of these disorders, the extent and seriousness of the problem must be assessed. Therefore, to provide comprehensive management, rehabilitation, prevention, and to frame a proper regional health policy such research is required and need to be conducted from time to time reported routinely from different regions of the country. Drug abuse is a complex phenomenon, which has various social, cultural, biological, geographical, historical, and economic aspects. The disintegration of the old joint family system, absence of parental love and care in modern families where both parents are working, decline of old religious and moral values, drug encouraging role of media, role models etc. lead to a rise in the number of drug abuse cases, who take drugs to escape hard realities of life⁷. Different locations play an important role and can influence the pattern and prevalence of substance abuse further various physical, social, economic, factors differ across age groups. Therefore, a proper comparison of comorbid SUD is required, among patients in different age group belonging to similar community. So we conducted this study with aim of comparing sociodemographic characteristics among treatment seeking Substance abusing subjects across different Age groups (Young adult 18–40 years, Middle Age 40–60 years & Elderly > 60 years) as per WHO age classification.

2. Methodology

The present study was conducted in de-addiction center of Psychiatry Department of Sir Sundar Lal hospital, Institute of Medical Sciences, Banaras Hindu University, Varanasi, a premier tertiary care hospital situated at northern part of India, covering and serving a large catchment area. The sample was collected from 1 January 2018 to 30 March 2019, both from outdoor and indoor service of department of Psychiatry, IMS, BHU, Varanasi. We took 30 subjects in each age groups of substance use, who were self-reporting, meeting the exclusion and inclusion criteria. The sample was determined by convenience method as the study was a part of MD thesis and the time duration for the study was one year, hence the sample size was limited. The study was started after approval from Ethics Committee of our institute.

All subjects were screened as per ICD-10 for substance dependent (all type). There after they were divided into 3 groups (Young adult 18–40 years, Middle Age 40–60 years & Elderly > 60 years) depending upon their age.

2.1 Inclusion Criteria

All the male and female individuals reporting to the substance abuse (alcohol, tobacco, opioid, cannabis, cocaine, benzodiazepines multidrug.) Those who gave written informed consent.

2.2 Exclusion Criteria

Those who had any comorbid physical, organic, psychotic disorder, had acute withdrawal symptoms and those who were unaccompanied by attendants.

2.3 Instruments and Tools

Socio-demographic proforma was used by investigators which is a semi-structured interview of socio-demographic variables such as age, sex, religion, marital status, education, occupation, monthly income, and residence this interview schedule was specifically developed for his study. A self-developed clinical profile sheet was used for assessment of clinical symptoms, Drug Abuse Screening Test (DAST)⁸, Severity of Dependence Scale (SDS)⁹, Alcohol Use Disorders Identification Test (AUDIT)¹⁰. DAST was administered to all the subjects, except alcohol dependent subjects in whom AUDIT¹⁰ was administered.

3. Analysis

The data were analyzed using SPSS version 23.0 for window and comparison chi square and p value were used.

4. Results

Tobacco was most commonly use psychoactive substance in all groups (93.3% in young adult, 96% in middle age and 96% in elderly), followed by alcohol (56.6% in young adult, 76.6% in middle age and 23.6% in elderly, followed by cannabis and opioid (Table 1). Use of cannabis and opioid gradually decrease with increasing age (cannabis & opioid 20% in young adult, 16.6% in middle age). Nobody

Table 1. Prevalence of substance use across different age groups

Substance	Young adult		Middle age		Elderly age		Total 90	χ ²	P
	N	%	N	%	N	%			
Tobacco	28	93.3%	29	96%	29	96%	86	.523	.770
Alcohol	17	56.6%	23	76.6%	7	23.6%	47	17.457	.000
Cannabis	6	20%	5	16.6%	0	0%	11	6.421	.040
Opioid	6	20%	5	16.6%	0	0%	11	6.421	.040
Benzodiazepine	2	6.6%	3	10%	2	6.6%	7	.310	.856
Polysubstance user	25	83.33%	29	96.6%	7	23.3%	61	41.922	0.000

Table 2. Socio-demographic profile of subjects having substance use

Socio-demographic status of subjects having substance use N %		Young adult		Middle age		Elderly		Significance	
		N	%	N	%	P			
Male		30	100%	30	100%	30	100%	0.364	
Family type-Nuclear		19	63.3%	25	83.35	10	33%	0.000	
Family History present		29	96.6%	28	93.3%	29	96.6%	0.770	
Married		15	50%	30	100%	28	93.3%	0.000	
Domicile Urban Rural		Urban	17	56.6%	17	56.6%	5	16.6%	0.001
		Rural	13	43.3%	13	43.3%	25	83.3%	
Religion	Hindu	29	96.6%	26	86.6%	28	93.3%	0.338	
	Muslim	1	3.3%	4	13.4%	2	6.6%		
Education	Illiterate	0	0%	1	3.3%	4	13.3%	0.546	
	Primary	1	3.3%	1	3.3%	2	6.6%		
	High school	10	33.3%	10	33.3%	10	33.3%		
	Intermediate	5	16.6%	6	20%	12	40%		
	Graduation	14	46.6%	12	40%	9	30%		
Occupation	Unemployed	9	30%	0	0%	0	0%	0.000	
	Retired	0	0%	0	0%	15	50%		
	Farmer	2	6.6%	0	0%	9	30%		
	Semi-skilled	5	16.6%	3	10%	2	6.6%		
	Government	2	6.6%	10	33.3%	0	0%		
	Self-employed	2	6.6%	14	48.6%	3	10%		
	Professional	2	6.65	3	10%	1	3.3%		
Socioeconomic status	Upper	0	0%	5	16.6%	3	10%	0.004	
	Upper middle	17	56.6%	16	53.3%	15	50%		
	Lower middle	10	33.3%	9	30%	2	6.6%		
	Upper lower	3	10%	0	0%	9	30%		
	Lower	0	0%	0	0%	1	3.3%		

Table 3. Co-morbidity of other substance along with tobacco

Tobacco user	Young adult (28)		Middle age (29)		Elderly (29)		χ^2	P
	N	%	N	%	N	%		
Alcohol	15	53.57%	22	75.8%	6	20.6%	3.830	.050
Cannabis	5	17.8%	5	17.2%	0	0%	.523	.469
Opioid	4	14.2%	5	17.2%	0	0%	.465	.495
Benzodiazepine	2	7.14%	3	10.3%	1	3.4%	1.047	.306

used cannabis and opioid in elderly treatment seeking subjects. Benzodiazepines are almost equally used by all three groups (6.6% in young adult, 10% in middle age and 6.6% in elderly). Difference between prevalence of alcohol, cannabis and opioid use across different age groups was statistically significant ($\chi^2=17.457$; $p=0.000$, $\chi^2 = 6.421$; $p=0.040$, and $\chi^2 = 6.421$; $p=0.040$ respectively).

Poly substance use is most commonly use in middle age followed by young adult and least common in elderly (young adult 83.3%, middle age 96.6%, in elderly 23.3%). Difference between prevalence of poly substance use across different age groups was statistically significant ($\chi^2 =41.922$; $p=0.000$) (Table 1).

There was statistically significant difference ($\chi^2 =15.833$; $p=0.000$) of number of substance users among different age groups with regards to different types of family structure like nuclear and joint family. Nuclear family was more associated with substance use in young and middle age (63.3% and 83.3% respectively) in comparison to elderly age group (33.3%) (Table 2). Most of treatment seeking subjects had been married (young adult 50%, middle age 100% and 93.3% in elderly), and there was statistically significant difference ($\chi^2=28.864$; $p=0.000$) of prevalence of substance abuse among different age groups with regards to marital status of substance use (Table 2). Treatment seeking behavior was significantly more common in young and middle age people belonging to urban background (in young adult 56.6%, middle age 56.6% and in elderly are 16.6%) while elderly people belong to rural background ($P=.001$), most of young adult were unemployed, mostly students. In middle age mostly self-employed followed by government employee (48.3% self-employed, 33.3% government employee). In elderly mostly, retired people followed by professional (50% retired, 33.3% professional 30% farmer). There was statistically significant difference ($\chi^2= 83.471$; $p=0.000$) of prevalence of substance abuse among different age groups with regards to occupational status of subjects having substance use. majority of participants belonged to upper middle socioeconomic

status in all age groups (young adult 56.6%, middle age 53.3%, elderly 50%) followed by lower middle in young and middle age group (young adult 33.3%, middle age 30%) while upper lower in elderly (30%) and least belong to lower socioeconomic status in all age groups. There was statistically significant difference ($\chi^2= 22.804$; $p=0.004$) of prevalence of substance abuse among different age groups with regards to socioeconomic status of subjects having substance use. There was no statistically significant difference of prevalence of substance abuse among different age groups with regards to Gender, Education, and religion of subjects having substance use (Table 2).

Tobacco user had high co-morbidity of other substance use. Majority of young adult tobacco user also used alcohol (53.5%), followed by cannabis (17.8%), opioid (14.2%) and benzodiazepine (7.14%). Majority of middle age tobacco user also used alcohol (75.8%), followed by cannabis (17.2%), opioid (17.2%) and benzodiazepine (10.3%). Only 20.6% of elderly tobacco user used alcohol and 3.4% used benzodiazepine. Difference between prevalence of co-morbidity of alcohol use in tobacco use across different age groups was statistically significant ($\chi^2=3.830$; $p=0.050$).

5. Discussion

Interestingly, none of the patients in our sample are female which could be due to stigma associated with drug use and hence reluctance to seek treatment. This does not mean females do not use drugs as evident from clinical practice and previous studies. Similar finding has been shown by the previous study conducted by Bashir N *et al.*¹¹ in Srinagar, Kashmir.

Our study results showed that prevalence of tobacco across different age groups was more than 93% in all age groups. This showed tobacco was most prevalent in our study because tobacco is often considered as a gateway of other drugs¹². Our study result showed that prevalence of alcohol in young adult was 56.6%, in middle age 76.6% and

in elderly 23.6%. Similar finding has been shown by previous study conducted by Ashtnkae HJ *et al.*¹³ at Nagpur found prevalence of Tobacco was 92.5% and alcohol 70.3%. Our study result showed that prevalence of cannabis and opioid in young adult and in middle age was 20% and 16.6% respectively and none of subjects use these substances in elderly. Similar finding has been shown by previous study conducted by Balhara YP *et al.*¹⁴ found prevalence of cannabinods 17.3% and opium 15.8%. Our study result showed that prevalence of Benzodiazepine across all age groups ranges 6-10%. Similar finding has been shown by previous study conducted by Roy *et al.*¹⁵ in Sylhet Bangladesh prevalence of benzodiazepine was 6.5%. Our study result shown that polysubstance use is most commonly use in middle age followed by young adult and least common in elderly (young adult 83.3%, middle age 96.6%, in elderly 23.3%). Similar finding has been shown by previous study conducted by Roy *et al.*¹⁵ in Sylhet Bangladesh found 61.8% patients abused more than one substance and 32.8% abused multiple substance. Another study by Sau *et al.*¹⁶ prevalence of polysubstance use 59.1%.

Our study result shown that tobacco user has high co-morbidity of other substance use (Table 3). Our study showed tobacco is most commonly used substance followed by alcohol followed by cannabis and other substances which was similar result shown by Srivastava M *et al.*¹⁷ probably reflecting true drug use pattern in the community.

Our study result showed that prevalence of alcohol and illicit drugs use decrease with increasing of age. This is due to the general trend among the elderly appears to be a reduction of substance use after the age of 50 years successively. This has been described as a “growing out of” or “aging out of” substance use. For example, Indian studies on alcohol use disorders have shown the downward trend of prevalence from 65–69 years to 85 years onward¹⁸.

Our study result showed that majority of subject were married (50% in young adult 100% in middle age 93.3% in elderly). This is due to universality of marriage in Indian culture. The findings of the current study reflect possibility of a relatively less impact of substance use disorder on marital status. However, the observation could simply be a result of more likelihood of those with good marital support to seek treatment. The proportion of married individuals in the current study is like previous studies from another de-addiction centre in India the proportion

of married individuals varied from 62.5% to 76.8% across different years in these studies¹⁹.

Our study result showed that majority of subjects (>93%) have family history of substance use (Table 2). This shows that easily availability of substance in home. Similar finding shown by Sarkar *et al.*²⁰ in West Bengal 83% patients had positive family history for alcoholism. Our study result showed that majority of subjects having substance use in young and middle age came from urban area (56.6%), which may be reflection of the increases of urbanization in our country. Similar, finding by Sau *et al.*²¹ 73.4% substance users belonging to urban area.

Our study showed that majority of subjects having substance use in young and middle age belonging to nuclear family (60% – 80%). Most of the patients belonged to nuclear families and urban localities, which may reflect the increase in urbanization, accessibility to treatment or a true prevalence of substance abuse in urban population. Moreover, our centre of study was in urban area, so majority of patients belong to the urban area. The findings were in line to other studies^{10,21,22}. This does not rule out those living in joint family. The various studies in different Indian setting showed that even individuals from joint families are involved in substance abuse.

Our study result shown that majority of subject belonging to Hindu religion (>90%). Similar finding shown by Dadwani²³ 90% substance user in India belong to Hindu by religion. Our study result shown that majority of subjects were educated beyond 10th class (80-90%) and nearly 40% were graduated in all age groups. Similar finding shown by Kapse *et al.*²⁴ 65% substance user in Nagpur were educated beyond matric level. Prajapati *et al.*²⁵ found among literate group of substance user majority (28%) were graduate. It may be explained on the basis that higher educated individuals may be due to more awareness of the harmful effects and inhibitions and came to de-addiction centre.

Our study result shown that most of young adult are self-employed like shopkeeper, businessman followed by unemployed mostly students (33.3% self-employed, 30% unemployed). Similar finding shown by Gul *et al.*²⁶ study at Jalandhar Punjab that 28.3% self-employed 12.3% were student. In middle age mostly self-employed followed by government employee (48.3% self-employed, 33.3% government employee). Similar finding shown by Prajapati *et al.*²⁵ majority of the abusers were self-employed (48%) followed by never employed. Businessmen and the

service class population carry high risk of drug abuse compared to other occupations. Perhaps persons in these groups need to maintain social relations and drugs act as a media for interaction. In elderly mostly, retired people followed by professional (50% retired, 33.3% professional 30% farmer).

Our study result shown that majority of participants belong to upper middle socioeconomic status in all age groups (young adult 56.6%, middle age 53.3%, elderly 50%) followed by lower middle in young and middle age group (young adult 33.3%, middle age 30%) while upper lower in elderly (30%) and least belong to lower socioeconomic status in all age groups. Similar finding shown by Prajapati *et al.*²⁵ majority of the abuser (55%) belonged to upper and lower middle socio-economic classes. Very few (19%) of the substance abusers were coming from lower S.E. class. The findings were corroborating with findings of other study Kapse *et al.*²⁴.

The present study has tried to delineate various psychosocial factors which are important in different age group in term of substance abuse. Thus it can help in an optimal psychosocial intervention which is patient centric⁵. Our study found that tobacco is an important initiative substance and socio-culturally accepted across different age groups, further tobacco became an important gateway substance for triggering further abuse hence multi prong and large scale programs should be undertaken to create awareness and to limit the use of substance. In the present study results are comparable to the studies done before. But various limitations can be highlighted like this study was primarily based on a treatment seeking population which is possibly different from the community-based subjects where substance use is still not thought to be a disease but only a social or legal problem. No women could be registered during the study period. This however reflects the characteristics of the patients attending the de-addiction services in the region. Social stigma dependence on others in the family for treatment seeking and lack of gender-sensitive treatment programs could be postulated as causes of no treatment seeking of women with addiction in our study.

6. Conclusion

Our study revealed that despite having strict legislation for prohibition of substance abuse, people are still addicted with alcohol cannabis drugs etc. So prohibition has done nothing more than drive liquor underground. There is a

need to change behavior of people at large. There is a need for further studies to find the community prevalence of drug use. The service provision is very limited restricted to the capital city and with none in the rural areas. The control of prescription drug use is another major issue which needs to be addressed. It is also worrying that female drug users are not able to seek help due to lack of appropriate facilities.

7. References

1. Degenhardt L, Chiu WT, Sampsonetal N. Toward a global view of alcohol, tobacco, cannabis, and cocaine use: Findings from the WHO world mental health surveys. *PLoS Medicine*. 2008; 5(7):1053–67. <https://doi.org/10.1371/journal.pmed.0050141>. PMID:18597549. PMCID:PMC2443200
2. Kertesz SG, Khodneva Y, Richman J, et al. Trajectories of drug use and mortality outcomes among adults followed over 18years. *Journal of General Internal Medicine*. 2012; 27(7):808–16. <https://doi.org/10.1007/s11606-011-1975-3>. PMID:22274889 PMCID:PMC3378735
3. Ray R. The extent, pattern and trends of drug abuse in India. National Survey, Ministry of Social Justice and Empowerment. Government of India and United Nations Office on Drugs and Crime; 2004.
4. Ilgen MA, Schulenberg J, Kloska DD, Czyz E, Johnston L, Malley PO. Prevalence and characteristics of substance abuse treatment utilization by US adolescents: National data from 1987 to 2008. *Addictive Behaviors*. 2011; 36(12):1349–52. <https://doi.org/10.1016/j.addbeh.2011.07.036>. PMID:21885197. PMCID:PMC3269242
5. Schlaerth KR, Splawn RG, Ong J, Smith SD. Change in the pattern of illegal drug use in an inner city population over 50: An observational study. *Journal of Addictive Diseases*. 2004; 23(2):95–107. https://doi.org/10.1300/J069v23n02_07. PMID:15132345
6. Simoni L, Yang HKW. Psychoactive drug abuse in older adults. *American Journal Geriatric Pharmacotherapy*. 2006; 4(4):380–94. <https://doi.org/10.1016/j.amjopharm.2006.10.002>. PMID:17296542
7. Nadeem A, Rubeena B, Agarwal VK, Piyush K. Substance abuse in India. *Pravara Medical Review*. 2009; 4:4–6.
8. Cocco KM, Carey KB. Psychometric properties of the drug abuse screening test in psychiatric outpatients. *Psychological Assessment*. 1998 Dec; 10(4):408. <https://doi.org/10.1037/1040-3590.10.4.408>
9. Gossop M, Darke S, Griffiths P, Hando J, Powis B, Hall W, Strang J. The Severity of Dependence Scale (SDS): Psychometric properties of the SDS in English and Australian samples of heroin, cocaine and

- amphetamine users. *Addiction*. 1995 May; 90(5):607–14. <https://doi.org/10.1046/j.1360-0443.1995.9056072.x>. PMID:7795497
10. Saunders JB, Aasland OG, Amundsen A, Grant M. Alcohol consumption and related problems among primary health care patients: WHO collaborative project on early detection of persons with harmful alcohol consumption-I. *Addiction*. 1993 Mar; 88(3):349–62. <https://doi.org/10.1111/j.1360-0443.1993.tb00822.x>. PMID:8461852
 11. Bashir N, Sheikh AA, Bilques S, Firdosi MM. Socio-demographic correlates of substance use disorder patients seeking de-addiction services in Kashmir India– A cross sectional study. *British Journal of Medical Practitioners*. 2015 Dec 1; 8(4):9–13
 12. Dhawan A, Jain R, Kumar N. Proceeding of workshop on Assessment of role of tobacco as a gateway substance and information available on evidence relating to tobacco, alcohol and other forms of substance abuse. AIIMS and WHO, New Delhi; 2004.
 13. Ashtankar HJ, Talapalliwar MR. Felt need and treatment-seeking barriers among substance abusers in urban slum area in central India. *Indian Journal of Psychological Medicine*. 2017 Jul; 39(4):436–40. <https://doi.org/10.4103/0253-7176.211760>. PMID:28852236. PMCid:PMC5559990
 14. Balhara YP, Mishra A, Sethi H, Ray R. A retrospective chart review of treatment seeking middle aged individuals at a tertiary care substance use disorder treatment centre in North Part of India over five successive years: Findings from drug abuse monitoring system. *The Scientific World Journal*. 2013; 1:316372. <https://doi.org/10.1155/2013/316372>. PMID:24288477. PMCid:PMC3826476
 15. Roy S, Miah MZ. Socio-demographic and clinical profile of substance abusers attending a Regional Psychiatric Hospital in Sylhet. Bangladesh. *Journal of Addiction Research and Therapy*. 2017; 8(5):342.
 16. Sau M, Mukherjee A, Manna N, Sanyal S. Sociodemographic and substance use correlates of repeated relapse among patients presenting for relapse treatment at an addiction treatment center in Kolkata, India. *African Health Sciences*. 2013; 13(3):791–9. <https://doi.org/10.4314/ahs.v13i3.39>
 17. Srivastava M, Jain S, Patel A. Substance use among outdoor treatment-seeking patients with mental illness: A case-control study from a tertiary care hospital of northern India. *Journal of Education and Health Promotion*. 2018; 7:75.
 18. Gupta PC, Saxena S, Pednekar MS, Maulik PK. Alcohol consumption among middle-aged and elderly men: A community study from Western India. *Alcohol*. 2003; 38:327–31. <https://doi.org/10.1093/alcalc/agg077>. PMID:12814899
 19. Basu D, Aggarwal M, Das PP, Mattoo SK, Kulhara, P, Varma VK. Changing pattern of substance abuse inpatients attending a de-addiction centre in North India (1978–2008). *Indian Journal of Medical Research*. 2012; 135(6):830–6.
 20. Sarkar AP, Sen S, Mondal S, Singh OP, Chakraborty A, Swaika B. A study on socio-demographic characteristics of alcoholics attending the de-addiction center at Burdwan Medical College and Hospital in West Bengal. *Indian Journal of Public Health*. 2013; 57:33–5. <https://doi.org/10.4103/0019-557X.111366>. PMID:23649141
 21. Venkatesh K, Mattoo SK, Grover S. Sexual dysfunction in men seeking treatment for opioid dependence: A study from India. *Journal of Sexual Medicine*. 2014; 11(8):2055–64 <https://doi.org/10.1111/jsm.12588>. PMID:24888452
 22. Rather YH, Bashir W, Sheikh AA, Amin M, Zahgeer YA. Socio-demographic and clinical profile of substance abusers attending a regional drug de-addiction centre in chronic conflict area: Kashmir, India. *Malaysian Journal of Medical Sciences*. 2013; 20(3):31–8.
 23. Dadwani RS, Thomas T. Prevalence of substance abuse: A community-based study. *International Journal of Community Medicine and Public Health*. 2017 Feb 1; 3(3):647–50. <https://doi.org/10.18203/2394-6040.ijcmph20160626>
 24. Kapse NS, Thakre SS, Thakre SB, Kapse SN. A cross sectional comparative study of quality of life of treatments seekers at de-addiction centre in central India using WHO BREF scale. *International Journal of Community Medicine and Public Health*. 2017 Oct 25; 4(11):4266–71. <https://doi.org/10.18203/2394-6040.ijcmph20174841>
 25. Prajapati BB, Dedun MR, Jalfava HS, Shukla AA. A study of socio-demographic profile and pattern of drug use among substance abusers attending mind care de-addiction center in Ahmedabad. *International Journal of Community Medicine and Public Health*. 2018 Dec 24; 6(1):286–9. <https://doi.org/10.18203/2394-6040.ijcmph20185259>
 26. Gul D, Sharma N. Socio-demographic profile and pattern of substance abuse among patients presenting to a de-addiction centre in a teaching hospital of Punjab. *International Journal of Medical and Dental Sciences*. 2017 Jul 1; 6(2):1504–8. <https://doi.org/10.19056/ijmdsjssmes/2017/v6i2/149906>