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Relationship between Components of Socio Demographic Profile and Substance Use among Psychiatric Patients Admitted in a Tertiary Care Hospital- in Eastern India

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ABSTRACT

Introduction: The mental illness and addictive disorders are among most burdensome disorders and often coexist but go undetected. There is very limited data available about the correlation between socio demographic profile and psychiatric illness among patient admitted in ward.
Aim & Objective: The aim and objective of the study is to assess relationship between components of socio-demographic profile and type of substance addiction among patients admitted in psychiatric ward.
Methods: A total of 125 participants, 90 males and 35 females were taken into study came across over the periods of 3 months. The tools used in the study were socio demographic questionnaire and WHO-ASSIST. It is a cross sectional hospital-based study. Only those who gave informed consent and met inclusion criteria were taken into study. The data was double entered, cleaned, and both descriptive and Chi-square done using the statistical package for social sciences (SPSS) version 16.
Result: Out of 125 patients taken into study 90 are found to be male and 35 are female. Most of the patients belongs to Hindu religion (99.2%). 53.6% are married and 46.4% are unmarried. Most of the patients are belongs to age group between 20-49 (89.6%). Substance use is more common in low education group up to secondary level (69.6%). Most of the patients are either unemployed or self-employed (72.8%). 88.8% patient came from rural area whereas 11.2% are from urban area. 57.6% patient belongs to joint family, 40% are belongs to nuclear family and 2.4% are belongs to extended family.
Conclusion: The overall result of the study confirms that substance addiction significantly present in psychiatric patients. There is significant correlation found between the gender, age, religion, educational level, occupation, domicile, types of family with substance use among patients admitted in psychiatric ward.

Keywords: Socio demographic profile, Substance use, Psychiatric patients, tobacco, alcohol.

INTRODUCTION

Substance use has become a public health crisis not only in developed countries but also in developing countries. The mental illness and addictive disorders are among most burdensome disorders and often coexist but go undetected. [1] Substance use disorder (SUD) in people with mental illness is associated with poor treatment compliance, course and outcome, higher homelessness, more unemployment, criminal offences, suicide, and poorer overall functioning whereas a reduction in substance use is associated with a reduction in subsequent admissions and symptoms. [2,3] People with psychological problems are generally believed to be at higher risk for negative reactions to psychoactive drugs, perhaps because the lack of control is especially frightening to them. [4,5]

The prevalence of patients with dual diagnosis suffering from a psychiatric disorder along with co-occurring substance use disorder is increasing through time. Response to treatment in patients with this comorbidity is difficult, regarding the high rate of recurrence and non-compliance to the treatment. [6] Substance use in the society has reached an endemic proportion and psychiatric wards are required to reflect the arising issues. The psychiatric wards population is disproportionately younger in age, male dominant and are mostly socially disorganized. [7]

Using drugs such as Lysergic acid diethylamide (LSD), cannabis and amphetamines produce symptoms like schizophrenia that make diagnosis difficult. [8,9] Many mental disorders are associated with an increased risk of later substance use conditions. [10]

In addition, evidence suggests that people who have severe mental illness use drugs for the same reasons as people who are not mentally ill, namely for recreational purposes to relax, for a 'high' etc. [11] Although there may be many other factors contributing to continued use, including addiction to the drug itself, individuals' attempts to manage psychiatric symptoms, and social risk factors such as living in areas with high drug availability. [12] The patients with substance problems had spent twice as many days in hospital compared with patients that did not have substance use problems. [13] Hence, this brings a significant clinical problem with cost implications and prolonged hospitalization to mentally ill patients with substance use.

Aim & Objective: To assess the relationship between the components of socio demographic profile and types of substance addiction in psychiatric patients admitted in psychiatric ward.

MATERIALS AND METHODS

Design: It is a cross sectional hospital-based study.

Sample: The study focused on the psychiatric patients admitted at department of psychiatry Mental Health Institute, S.C.B Medical College and Hospital, Cuttack. All the patients admitted in the psychiatric ward (including drug de-addiction ward) came across over the period of 3 months were approached. Total 125 samples were collected those satisfy the inclusion criteria by applying convenient sampling technique. Among 125 psychiatric patients were taken, out of which 90 male and 35 females. Samples chosen for the study was based on the following inclusion and exclusion criteria. Consent for participation in study was taken from both patients and Care giver. The socio demographic details are noted. The WHO-ASSIST was personally administered by the researcher.

Inclusion criteria

1. Cases admitted in department of Psychiatry, Mental Health Institute (CoE) at S.C.B Medical College and Hospital, Cuttack.
2. Patients between the age of 11-80 years are taken into study.
3. Those who gave informed consent for the study.

Exclusion criteria

1. Age group below 11 and above 80 years.
2. Those who did not gave the informed consent to participate in the study.

Tools used for the study

Researcher designed socio-demographic data questionnaire.

The researcher designed questionnaire captured identification data and relevant demographic variables like name, age, sex, religion, marital status, occupation, level of education, domicile, types of family.

WHO-ASSIST (Alcohol, Smoking and Substance Involvement Screening Test).

The WHO-ASSIST has been found to be a valid screening test for psychoactive substance use individuals who use a number of substances. Psychoactive substances usually commonly encountered in Indian setting are tobacco, cannabis, alcohol, opioids etc. Patient who are taking at least one substance are considered as drug user and non-user are patient not taking any of psychoactive substances.

RESULTS

A. Relationship between gender and substance use.

Table-1: Substance user (at least one substance) and non-user (substance free) measured through ASSIST.

Gender	Substance (At least one)			Chi- square	P- value	Significant
	User	Non-user	Total			
Male	66 (73.3%)	24 (26.7%)	90	24.200	0.000	Yes
Female	8 (22.9%)	27 (77.1%)	35			
Total	74 (59.2%)	51 (40.8%)	125			

Out of 125 patient taken into study 90 are male 35 are female. 74(59.2%) patient are using at least substance out of 125. 63(73.3%) out of 90 male are user, using at least one substance and 24 are non-user. 8(22.9%) out of 35 female are user and 27 are non-user. Male to female ratio of substance use among psychiatric patient is found to be 3.2:1.

Table-2: Poly substance user and poly substance non- user measured through ASSIST.

Variable Name	Poly substance			Chi- square	P- value	Sig.
	User	Non-user	Total			
Male	48 (53.3%)	42 (46.7%)	90	24.200	0.000	Yes
Female	4 (11.4 %)	31 (88.6%)	35			
Total	52 (41.6%)	73 (58.4%)	125			

Out of 125 patients 52 (41.6%) patients are poly substance user and 73 (58.4%) are poly substance non-user. Out of 90 males 48 (53.3%) are user and 42 (46.7%) are non- user. Out 35 females 4 (11.4%) are user and 31 (88.6%) are non- user.

Table-3: Individual substance use by subject measure through ASSIST.

Gender	No of patient	Number of patients				Chi- square	P- value	Sig.
		Tobacco	Alcohol	Cannabis	Opioids			
Male	90	59 (65.5%)	33 (36.6%)	40 (44.4%)	4 (4.4%)	24.200	0.000	Yes
Female	35	4 (11.4%)	1 (2.8%)	7 (20%)	0			
Total	125	63 (50.4%)	34 (27.2%)	47 (37.6%)	4 (3.2%)			

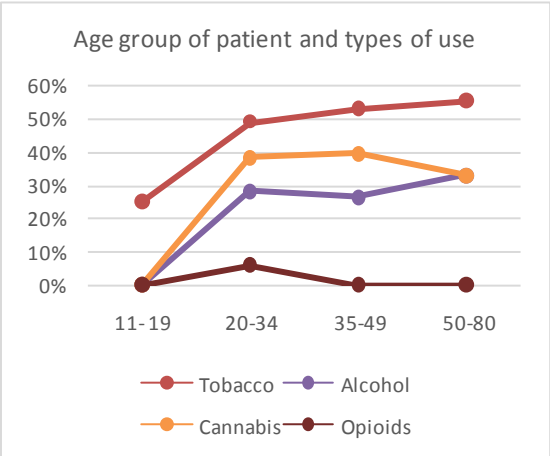
Out of 125 subject 63 (50.4%) patient are using tobacco, 34 (27.2%) are using alcohol, 47 (37.6%) patient using cannabis, 4 (4.4%) patient are using opioids. Tobacco, cannabis, alcohol, opioids are the drugs commonly used by psychiatric patient in decreasing order.

B. Relationship between age distribution and substance use.

Table-4: Age groups and type of substance use measured through ASSIST.

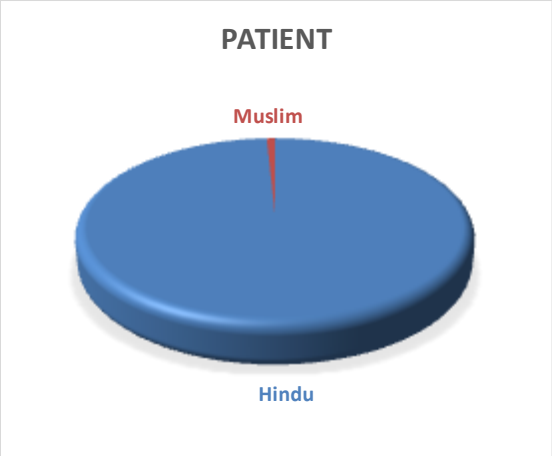
Age in groups	No of patient	Substances				Chi- square	P- value	Sig.
		Tobacco	Alcohol	Cannabis	Opioids			
11-19	4	1 (25%)	0	0	0	86.552	0.000	Yes
20-34	67	33 (49.3%)	19 (28.4%)	26 (38.8)	4 (6%)			
35-49	45	24 (53.3%)	12 (26.7%)	18 (40%)	0			
50-80	9	5 (55.6%)	3 (33.3%)	3 (33.3%)	0			
Total	125	63 (50.4 %)	34 (27.2%)	47 (37.6%)	4 (3.2%)			

Out of total 125 subjects age group between 11-19 years are 4 (3.2%), between 20-34 years are 67 (53.6%), between 35-49 years are 45 (36.0%) and between 50-80 years are 9 (7.2%), Young adult and middle age and elderly patients are more prone to tobacco, alcohol, cannabis use. Whereas opioids is commonly used by young adult age group between age 20-34 year.



C. Religion.

Out of 125 patient 124 are Hindu and 1 is Muslim. No subject belongs to other religions.

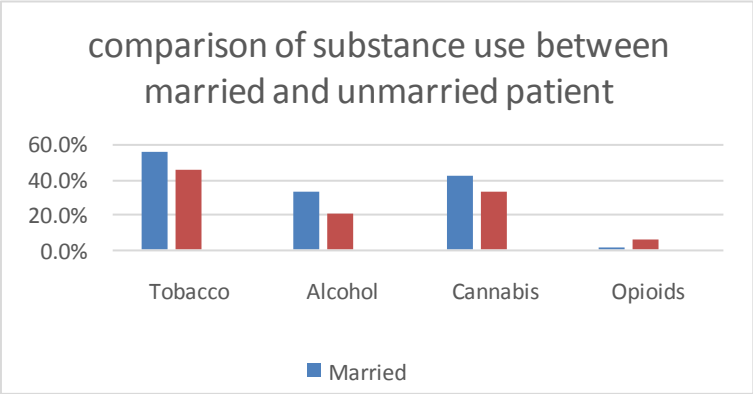


D. Relationship between marital status and types of substance use.

Table-5: Marital status and types of substance use measured through ASSIST.

Marital Status	No of patient	No of patient using substance				Chi- square	P- value	Sig.
		Tobacco	Alcohol	Cannabis	Opioids	0.648	0.421	No
Married	67	37 (55.2%)	22 (32.8%)	28 (41.8%)	1 (1.5%)			
Unmarried	58	26 (44.8%)	12 (20.7%)	19 (32.8%)	3 (5.2%)			
Total	125	63(50.4%)	34 (27.2%)	47 (37.6%)	4 (3.2%)			

Out of 125 patient 67 (53.6%) are married and 58 (46.4%) are unmarried. Among married patient 37(55.2 %) are using tobacco, 22(32.8%) are using alcohol, 28(41.8%) are using cannabis and 1(1.5%) is using opioids. Among unmarried patient 26(44.8%) are using tobacco, 12(20.7%) are using alcohol, 19(32.8%) are using cannabis and 3(5.2%) are using opioids. Ratio of married to unmarried is found to be 1.2:1, 1.6:1, 1.3:1, 1:3.4 respectively for tobacco, alcohol, cannabis, and opioids. Prevalence of substance use is found to be higher in married than unmarried patient except opioids, which is higher in unmarried patients.

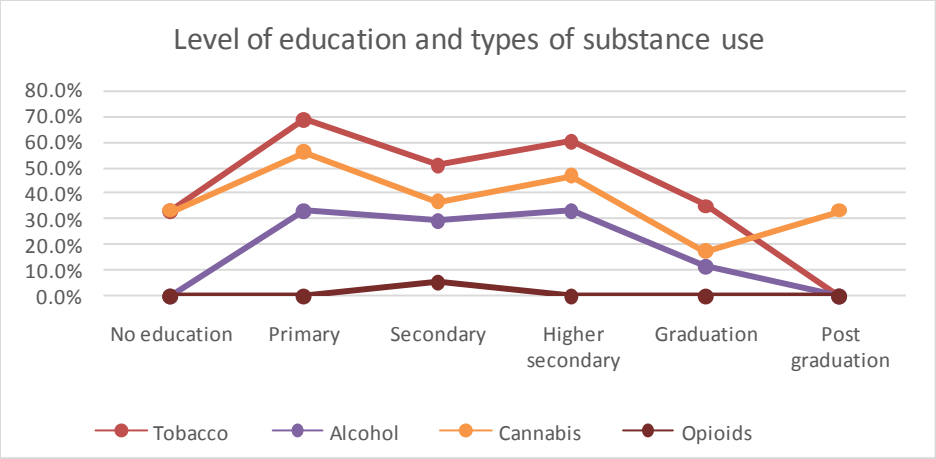


E. Relationship between education level and substance use.

Table- 6: Level of education and types of substance use measured through ASSIST.

Level of education	No of patients	No of patient abusing substances				Chi- square	P- value	Sig.
		Tobacco	Alcohol	Cannabis	Opioids			
No education	3	1 (33%)	0	1 (33%)	0	154.792	0.000	Yes
Primary	16	11 (68.7%)	6 (33.5%)	9 (56.2%)	0			
Secondary	71	36 (50.7%)	21 (29.5%)	26 (36.6%)	4 (5.6%)			
Higher Secondary	15	9 (60%)	5 (33.3%)	7 (46.6%)	0			
Graduation	17	6 (35.2%)	2 (1.6%)	3 (17.4%)	0			
Post-graduation	3	0	0	1 (33%)	0			
Total	125	63 (50.4%)	34 (27.2%)	47 (37.6%)	4 (3.2%)			

Substance use is more prevalent in low education group.



F. Relationship between occupation and substance use.

Table-7: Occupation and types of substance use measured through ASSIST.

Occupation	No of Patients	No of patient abusing substances				Chi- square	P- value	Sig.
		Tobacco	Alcohol	Cannabis	Opioids			
Student	8	2 (25%)	1 (12.5%)	0	0	57.280	0.000	Yes
Labour	14	11 (78.5%)	10 (71.4%)	10 (71.4%)	1 (7.1%)			
Self- employed	48	19 (39.6%)	10 (20.8%)	17 (35.4%)	1 (2.0%)			
Employed	12	6 (50%)	2 (16.6%)	3 (25%)	0			
Unemployed	43	25 (58.1%)	11 (25.6%)	17 (39.5%)	2 (4.7%)			
Total	125	63 (50.4%)	34 (27.2%)	47 (37.6%)	4 (3.2%)			

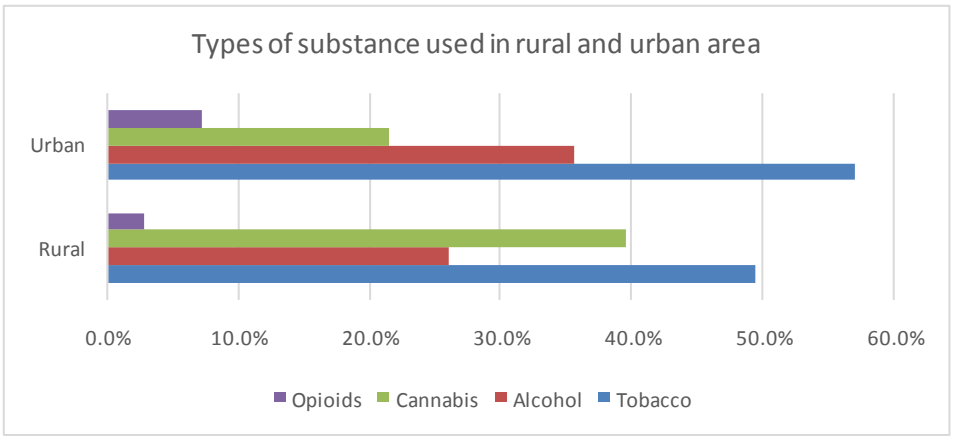
Prevalence of substance use is highest in occupation like labour followed by unemployed and lowest among students.

G. Relationship between domicile and substance use.

Table-8: Domicile and substance use measured through ASSIST.

Domicile	No of patient	No of patient abusing substances				Chi- square	P- value	Sig.
		Tobacco	Alcohol	Cannabis	Opioids			
Rural	111	55 (49.5%)	29 (26.1%)	44 (39.6%)	3 (2.7%)	75.272	0.000	Yes
Urban	14	8 (57.1%)	5 (35.7%)	3 (21.4%)	1 (7.1%)			
Total	125	63 (50.4%)	34 (27.2%)	47 (37.6%)	4 (3.2%)			

Out of 125 patient 111 (88.8%) are from rural area and 14 (11.2%) are from urban area. Substance use is significantly found in patient from rural as well from urban area. Only cannabis is more prevalent in rural area whereas tobacco alcohol and opioids are more prevalent in urban area.



H. Relationship between type of family and substance use

Table-9: Types of family and types of substance use measured through ASSIST.

Types of family	No of patient	Types of substances				Chi- square	P- value	Sig.
		Tobacco	Alcohol	Cannabis	Opioids			
Joint	72	35 (48.6%)	17 (23.6%)	23 (31.9%)	2 (2.7%)	59.632	0.000	Yes
Nuclear	50	27 (54%)	17 (34%)	23 (46%)	2 (4.1%)			
Extended	3	1 (33.3%)	0	1 (33.3%)	0			
Total	125	63 (50.4%)	34 (27.2%)	47 (37.6%)	4 (3.2%)			

Out of 125 patient 72 are from joint family, 50 are from nuclear family and 3 are from extended family. Prevalence of substance use is higher in patient belongs to nuclear family than joint family.

Table-10: $\chi^2$of categorical variables to find out the homogeneity of data.

Variable	Mean	SD	df	χ^2	P value
Gender	1.28	.451	1	24.200	0.000
Age	2.47	.679	3	86.552	0.000
Religion	1.01	.089	1	121.032	0.000
Marital status	1.46	.501	1	.648	0.421
Educational level	2.43	1.102	5	154.792	0.000
Occupation	3.54	1.248	4	57.280	0.000
Domicile	1.11	.317	1	75.272	0.000
Types of Family	1.45	.546	2	59.632	0.000

The above table shows χ^2 value of all categorical variables to find out homogeneity of data. This table includes categorical variable such as gender, age, religion, marital status, educational level, occupation, domicile and types of family. The mean score of gender is 1.28, standard deviation 0.451 with df 1. The χ^2 value of gender is 24.200 which is significant at point 0.05 level (P<0.05). The χ^2 value of age, religion, educational level, occupation, domicile, types of family respectively are 86.552, 121.032, 154.792, 57.280, 75.272, 59.632 which are significant at 0.05 level (P <0.05) with respective df such as 3, 1, 5, 4, 1, 2 which are significant at point 0.05 level (P< 0.05). The χ^2 value of marital status is 0.648 with p value of 0.421 which is not significant at point 0. 05 (P > 0.05). The mean score, standard deviation and df of marital status followed by 1.46, 0.501, 1 respectively.

DISCUSSION

Among 125 patients taken into study 90 are male and 35 are female. 59.2% of the psychiatric patient are using substances which is about 3 times higher than general population (18.6%). [15] This is also higher than the study conducted by Dube and Handa et al. (substance use was reported to be twice as common in individual with psychiatric disorder as compared to those without a psychiatric disorder). [16] Male to female ratio of substance use among psychiatric patient is found to be 3.2:1. Male to female ratio of alcohol use among psychiatric patient is found to be 13:1 whereas in general population it is found to be 17:1. [14]

50.4% of psychiatric patient are using tobacco, which is equivalent to general population (55.8%) according to NHS report. 27.2% of psychiatric patient are using alcohol, whereas about 14.6% of the general population (between 10-75year age) use alcohol in India according to National survey done by Govt. of India in 2019. [14] 37.6% are psychiatric patient using cannabis, whereas about 2.8% of the general population reports having used any cannabis product within the previous year [14] and 4.4% of psychiatric patient are using opioids, whereas about 2.1% of the country's population use Opioids. [14]

In the present study it is found that young adult, middle age and elderly patient are more prone to tobacco, alcohol, cannabis use, this pattern is similar for general population. [15] Whereas opioids are commonly used by young adult age group between 20-34 year. Most of the patient are belongs to Hindu religion. Prevalence of substance use is found to be higher in married than unmarried patient which is similar to general population. [15] Except for opioids which is higher in unmarried patient. Substance use is more prevalent in low education group, which is same for general population. [15] Prevalence of substance use is higher in occupation like labour followed by unemployed and lowest among student. Substance use is

significantly found in patient from rural as well from urban area. Only cannabis is more prevalent in rural area whereas tobacco, alcohol and opioids are more prevalent in urban area. Prevalence of substance use is higher in patient belongs to nuclear family than joint family.

It is also concluded that patient of young adult and middle age group uses more psychoactive substances which increase the rate of disability in them. It is also found that male patients are more addicted to substances than female patients. It may be due to dominance of male over female in the society and male are the sole earner of the family in most of the cases.

CONCLUSION

From the above study it is concluded that components of socio demographic profile have a tremendous effect on the substance use pattern among patients admitted in psychiatric ward. The overall result of the study confirms that substance addiction significantly present in psychiatric patients which is very higher than general population. Psychiatric patients are more exposed to the tobacco products, cannabis, alcohol, opioids and other addictive substances which creates a barrier in their treatment, complaints and adherence to therapy. Such a high prevalence of substance use among psychiatric patient can not be neglected rather to be considered carefully. Comorbid substance use disorders associated with primary psychiatric illness are also need to be diagnosed and managed effectively. It may lead to decrease hospital stay and may modify the course of the primary psychiatric illness and better prognosis. A step forward to this dimension of managing substance use disorder associated with psychiatric illness may add a great benefit to the quality of life of patient.

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Purpose of study: academic

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