

Pattern of Substance Use and Psychiatric Co Morbidity among Substance Users Attending a Mental Health Facility in Damaturu, North East Nigeria: Outcome of a Two Year Retrospective Review

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ABSTRACT

Background: The use of psychoactive substances is a major global public health problem and is associated with psychosocial, economic and mental health consequences. The occurrence of co-morbidity with substance use disorders has been shown to make diagnosis of either condition problematic, worsen prognosis, linked with poorer compliance to treatment and associated with an overall increase in morbidity and mortality. Not much is known about the pattern of substance use and accompanying co morbidity in this geopolitical zone of the country, hence this study.

Aims and objectives: The study aimed to evaluate the co morbidity and associated clinico-demographic characteristics of patients diagnosed with substance use disorder (dependence syndrome) in a tertiary health institution in Damaturu, North East Nigeria.

Methods: We conducted a retrospective review between May 2017 and April 2019 of case notes of patients and extracted socio demographic, clinical and drug related data from their clinical records. The study participants consisted of eighty eight (88) patients and the participants included in the study met ICD-10 diagnostic criteria of dependence syndrome. Data analyses were done using Statistical Package for Social Sciences version 21.

Results: Majority of the respondents were male 85/88 (96.6%), adolescents and young adults 65/88 (73.9%), had friends using substances 82/88 (93.2%), were daily multiple times user 61/88 (69.3%) and had previous history of substance use 74/88 (84.1). Indian hemp is the most widely used substance among the participants and almost half of the participants 36/88 (40.9%) reported “feeling high” as the reason for substance use. Depression was the commonest psychiatric co morbidity among the substance users 43/88 (48.9%), followed by bipolar disorders 14/88 (15.9%) and schizophrenia 11/88 (12.5%). Peer pressure influence, co morbidity and reason for substance use were significantly associated with substance use.

Conclusion: The findings in this study suggest the need for psycho educational programmes that will target young adults and adolescents who have increased propensity to use substances. Continuous research in substance use disorders will also help in monitoring trends and formulating adequate strategies for control of substance use.

Keywords: Substance use; Psychiatric co morbidity; Substance users; Mental health facility; Damaturu; Nigeria

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INTRODUCTION

The use and abuse of psychoactive substances is a complex behavior seen among young people all over the world and has become a problem of national public health significance [1]. Among youths and young adults, substance use is a worldwide epidemic that can impact negatively on health, family, educational life and society [2]. The recent nationwide survey on psychoactive drug use patterns in Nigeria indicated an overall rate in the country (14.4%) that exceeds the global average at 2016 of 5.6% [3]. While opiates were commonly abused in the northern part of the country, cannabis was more commonly abused in the southern region [3].

Recent trends indicate that the use and abuse of substances have dramatically increased worldwide particularly in developing countries [2]. Most countries in sub Saharan Africa are experiencing rapid economic, social and cultural transitions which have created favorable conditions for increased and socially disruptive substance use [3]. Social pressures from peers, family and societal role models are also among the major reasons why people take drugs [4] and this has contributed to the increasing incidence of psychosocial problems among the youths [5].

Global surveys indicate considerable co morbidity of substance use disorders with other mental illness exacting significant toll on human lives and productivity [6,7]. According to a US survey, 4% of its adult population met the criteria for both a mental illness and substance use disorder, this has been associated with psychosocial, economic and medical complications [7]. A global mental health facility survey also found varied patterns of somatic co morbidities based on types of psychoactive substances abused [8]. People with substance use disorders are more likely to die younger and are more likely to have a psychiatric disorder than people without substance use disorder [9].

The North Eastern Nigeria has its own share of the national drug abuse epidemic just like the national picture that has exhibited changing trends over time [10]. It is therefore curious that only few local studies have focused on examining the trends of substance use and psychiatric co morbidity that could coexist with and worsen the prognosis of substance use problem, hence this current study.

METHODS

This was a two year retrospective case note review of patients diagnosed with mental and behavioral disorders due to psychoactive substance use (dependence syndrome) between May, 2017 and April, 2019 in Yobe State Specialist Hospital, Damaturu, Nigeria. Each case was critically evaluated and reviewed by a consultant psychiatrist and the diagnosis of mental and behavioral disorders due to psychoactive substance use (dependence syndrome) was made using the International Statistical Classification of Diseases and Related Health Problems, 10th edition (ICD-10). Case notes were retrieved manually from the health record department of the hospital.

The hospital is a 300 bedded referral institution with facilities and mental health professionals (two full time consultant psychiatrists, five visiting consultant psychiatrists, five psychiatric nurses and clinical psychologists) to care for the mentally ill in Yobe State, neighboring states in the north eastern region of Nigeria and the West African sub region as well. Other clinical services such as nephrology, cardiology, urology, orthopedic surgery etc are also rendered in the hospital.

A proforma was developed by the researchers to collect relevant information from the case notes based on literature such as age, marital status, level of education, occupation etc. The questionnaire also contained questions on age at onset of substance use, how the client was introduced to substance use, reasons for substance use, number of psychoactive substances use, mode of obtaining the substance, etc. The study was approved by the Research and Ethical Committee of Yobe State Specialist Hospital, Damaturu. All the data collected were coded and analyzed using the Statistical Package for Social Sciences version 21 software.

RESULTS

Table 1 shows that a total of 88 participants were included in the study. Majority of them were Muslims 79.5% (70/88), male 96.6% (85/88), from polygamous family 65.9% (58/88), had previous history of substance use 84.1% (74/88) and had no history of chronic medical illness 75% (66/88). The most prominent age

Table 1: Socio demographic Characteristics of the patients (N=88).

Socio demographics	Group	Frequency	Percent
Gender	Male	85	96.6
	Female	3	3.4
	Total	88	100.0
Age groups	10-19 years	19	21.6
	20-29 years	46	52.3
	30-39 years	10	11.4
	40-49 years	8	9.1
	50 years or more	3	3.4
	Missing	2	2.3
	Total	88	100.0
Religion	Islam	70	79.5
	Christianity	18	20.5
	Total	88	100.0
Marital Status	Single	50	56.8
	Married	31	35.2
	Separated	4	4.5
	Divorced	2	2.3
	Widowed	1	1.1
	Total	88	100.0
Tribe	Kanuri	37	42.0
	Hausa	32	36.4
	Fulani	9	10.2
	Yoruba	7	8.0
	Igbo	2	2.3
	Others	1	1.1
	Total	88	100.0
Education	No formal education	10	11.4
	Primary	5	5.7
	Secondary	40	45.5
	Tertiary	31	35.2
	Dropped out	2	2.3
	Total	88	100.0
Occupation	Students	34	38.6

	Civil servant	15	17.0
	Artisan	22	25.0
	Farmer	13	14.8
	Unemployed	4	4.5
	Total	88	100.0
Family Type	Polygamous	58	65.9
	Monogamous	30	34.1
	Total	88	100.0
Residence	Urban	40	45.5
	Semi urban	28	31.8
	Rural	20	22.7
	Total	88	100.0
Size of children	None	53	60.2
	1-4	30	34.1
	5-8	4	4.5
	9 or more	1	1.1
	Total	88	100.0
Quality of	Cordial	39	44.3
Family Relationship	Not cordial	49	55.7
	Total	88	100.0
Previous History of	Yes	74	84.1
Substance use	No	14	15.9
	Total	88	100.0
History of Chronic	Yes	22	25.0
Medical illness	No	66	75.0
	Total	88	100.0

group was 20 – 29 years (52.3%). More than half of the respondents were single 56.8% (50/88) and almost half of them 45.5% (40/88) had secondary education.

More than one third of the respondents were students 38.6%; 25% artisans; 17% civil servants and 14.8% farmers. More than half of them 55.7% (49/88) described the quality of their family relationship as not ‘cordial’.

Figure 1 shows indian hemp as the most widely used substance among the participants (40.9%), next to which are opioids and tranquilizers (11.4%) respectively. Tobacco has 5.7%, Rohypnol and other sedatives (6.8%) and inhalants (9.1%).

Figure 2 shows most of the participants reported the need to feel high as the most prominent reason for wanting to use psychoactive substances, next to which is need to improve mood (15.9%), relieve pain (11.4%), compulsive urge (13.8%) among others.

Figure 3 shows depression is the most predominant comorbidity among the substance users, next to which is bipolar disorder (15.9%), schizophrenia (12.5%), among others.

Table 2 shows that the percentage of single and multiple substance users were equal (50%) while more than two thirds of the respondents (69.3%) were multiple times user in a day. More than half used oral route (53.4%) while 22.7% of them used both oral and injection routes. Almost all have a friend using substances (93.2%) and 70.5% of them have religious parents.

Table 3 shows that most of the participants used substances in order to feel high (40.9%), after which is compulsive urge to use (13.6%),

relieving of pain (11.4%), withdrawal of symptoms (9.1%) among other reasons. The test of association between these reasons and substance use was statistically significant [χ^2 (54)=94.83, p=0.001]. However, the Cramer’s V shows the strength of the association is

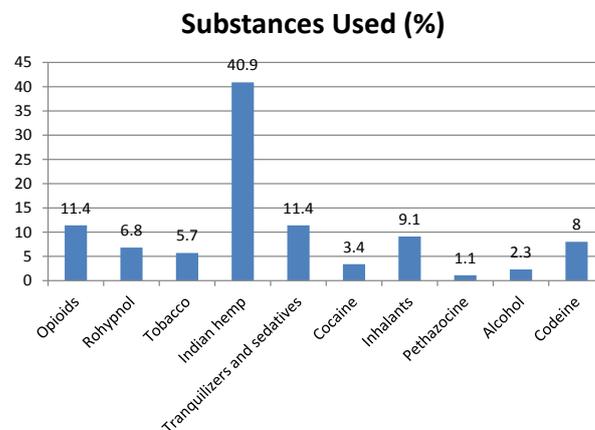


Figure 1: Substances of use.

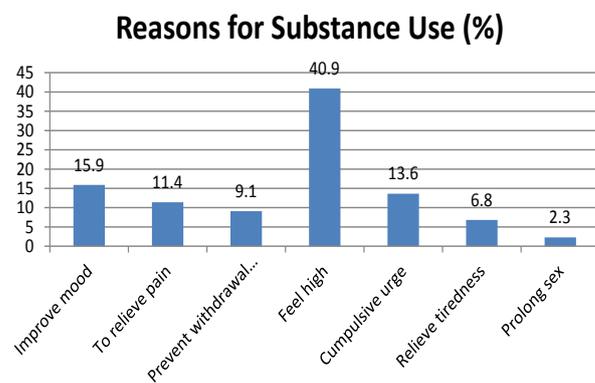


Figure 2: Reasons for substance use.

Table 2: Other related substance use behaviours.

Substance Use Behavior	Groups	Frequency	Percent
Patter of use	Single substance use	44	50.0
	Multiple substance use	44	50.0
	Total	88	100.0
Frequency of use	Once daily	27	30.7
	Multiple times daily	61	69.3
	Total	88	100.0
Route of use	Oral	47	53.4
	Injection	1	1.1
	Inhalation	3	3.4
	Oral and inhalation	17	19.3
	Oral and injection	20	22.7
Total	88	100.0	
Has a drug using friend	Yes	82	93.2
	No	6	6.8
	Total	88	100.0
Has religious parents	Yes	62	70.5
	No	26	29.5
	Total	88	100.0

Table 3: Association between Reasons for Substance Use and Substance use using Chi-square for Independence.

Substances of use	Reasons for Substance Use							Total
	To improve mood	To relieve pain	To prevent withdrawal symptoms	To feel high	Compulsive urge	To relieve tiredness	To prolong the time of sexual intercourse	
Opioids	1(10%)	3 (30%)	0	5 (50%)	1 (10%)	0	0	10
Rohypnol	2 (33.3%)	2 (33.3%)	1 (16.7%)	1 (16.7%)	0	0	0	6
Tobacco	1 (20%)	0	0	3 (60%)	1 (20%)	0	0	5
Indian hemp	4 (11.1%)	0	3 (8.3%)	16 (44.4%)	10 (27.8%)	1 (2.8%)	2 (5.6%)	36
Tranquilizers	0	1 (10%)	3 (30%)	2 (20%)	0	4 (40%)	0	10
Cocaine	2 (66.7%)	0	0	1 (33.3%)	0	0	0	3
Inhalants	0	0	0	7 (87.5%)	0	1 (12.5%)	0	8
Pethazocine	0	1 (100%)	0	0	0	0	0	1
Alcohol	2 (100%)	0	0	0	0	0	0	2
Codeine	2 (28.6%)	3 (42.9%)	1 (14.3%)	1 (14.3%)	0	0	0	7
Total	14 (15.9%)	10 (11.4%)	8 (9.1%)	36 (40.9%)	12 (13.6%)	6 (6.8%)	2 (2.3%)	88

Pearson Chi-square=94.832, df=54, p=0.001, Cramer's V=0.424.

Table 4: Association between Comorbid Psychiatric Disorder and Substance use using Chi-square for Independence.

Substances of use	Comorbid Psychiatric Disorder							Total
	Schizophrenia	Schizoaffective disorder	Bipolar disorder	Mania	Depression	Personality disorder	Unspecified psychotic disorder	
Opioids	0	0	3 (30%)	0	6 (60%)	1 (10%)	0	10
Rohypnol	0	0	2 (33.3%)	0	4 (66.7%)	0	0	6
Tobacco	0	0	1 (20%)	0	4 (80%)	0	0	5
Indian hemp	11	4 (11.1%)	6 (16.7%)	3 (8.3%)	11 (30.6%)	0	1 (2.8%)	36
Tranquilizers	0	0	1 (10%)	0	8 (80%)	0	1 (10%)	10
Cocaine	0	0	0	1 (33.3%)	2 (66.7%)	0	0	3
Inhalants	0	3 (37.5%)	1 (12.5%)	1 (12.5%)	1 (12.5%)	1 (12.5%)	1 (12.5%)	8
Pethazocine	0	0	0	0	0	0	1 (100%)	1
Alcohol	0	0	0	0	2 (100%)	0	0	2
Codeine	0	0	0	1 (14.3%)	5 (71.4%)	1 (14.3%)	0	7
Total	11 (12.5%)	7 (8%)	14 (15.9%)	6 (6.8%)	43 (48.9%)	3 (3.4%)	4 (4.5%)	88 (100%)

Pearson Chi-square=81.996, df=54, p=0.008, Cramer's V=0.394.

Table 5: Association between Precipitating Factor to Substance Use Behaviour (SUB) and Substance use using Chi-square for Independence.

Substance of use	Precipitating Factor to SUB			Total	χ^2	df	Cramer's V	Sig.
	Peer pressure influence	Curiosity	Prescribed by a health worker					
Opioids	8 (80%)	0	2 (20%)	10	39.730	19	.475	.002
Rohypnol	5 (83.3%)	1 (16.7%)	0	6				
Tobacco	2 (40%)	1 (20%)	2 (40%)	5				
Indian hemp	27 (75%)	9 (25%)	0	36				
Tranquilizers	3 (30%)	2 (20%)	5 (50%)	10				
Cocaine	1 (33.3%)	1 (33.3%)	1 (33.3%)	3				
Inhalants	7 (87.5%)	1 (12.5%)	0	8				
Pethazocine	0	0	1 (100%)	1				
Alcohol	1 (50%)	1 (50%)	0	2				
Codeine	3 (42.9%)	0	4 (57.1%)	7				
Total	57 (64.8%)	16 (18.2%)	15 (17%)	88 (100%)				

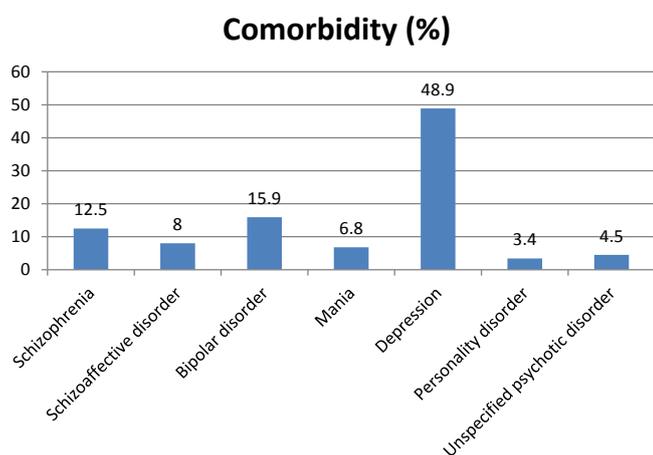


Figure 3: Psychiatric co morbidities.

relatively weak though.

Table 4 shows that the test of association between co morbidity and substance use was statistically significant [$\chi^2 (54)=81.99$ $p=0.008$].

Table 5 shows that the most precipitating factor for substance use behaviour is peer influence (64.8%). A test of association between these precipitating factors and substance use was statistically significant [$\chi^2 (19)=39.73$ $p=0.002$].

DISCUSSION

This is one of the first few retrospective studies that looked into the pattern of substance use and psychiatric co morbidity among substance users attending a mental health facility in North East Nigeria. The socio demographic characteristics revealed that the majority of the participants in this study were male, this agrees with the findings of Maccoby and Jacklin [11] who reported male predominance with respect to substance use. The reason for the male predominance in this study might be due to cultural influences that view substance use among females as a taboo while the use by men despite prohibition could be condoned. Also, males are more likely to display aggression, violence, independence and a sense of adventure all of which culminate in experimentation, increased risk of substance use and misuse [11].

The preponderance of subjects in this study was between 10-29years, this is in agreement with the findings of Webb et al. [12] who reported similar outcomes that substance use disorder is a problem among the youths who are in their teens and twenties. The most commonly used illicit substance in this study was cannabis, this differs from the finding of Anyanwu et al. [13] who reported alcohol as the most commonly abused substance among secondary school students in Abakaliki, Nigeria. This difference may be driven by the religious beliefs of mostly northern Muslims against the use of alcohol, however the insurgency that has engulfed the area for more than a decade might have further increased the rate of substance misuse in the area.

The results from this study also showed that motives for substance use and the test of association between reasons for substance use and substance use disorder was statistically significant. This is similar with the findings of Annabel [14] where the young people recruited in their study reported enhancement of mood, activity, pleasurable experiences and relieving pain as reasons for substance use. This is because; evidence has shown that for many young people, the decision to use a drug is based on a rational appraisal

process, rather than a passive reaction to the context in which a substance is available [15].

Majority of the substance users in the study were from religious parents, this differs from the finding of White et al. [16] who found that youths who are from religious homes are likely to share attitudes, beliefs and values that discourage the use of substances. However, our finding in this study agrees with that of Monica et al. [17] who found that religious involvement was not significantly protective of substance use.

In our study, depression was major co morbidity among participants with substance use problem and the test of association between co morbid psychiatric disorder and substance use was statistically significant. This is consistent with the finding of Shuckit [18] who reported that people often misuse substances to ease the symptoms of an undiagnosed depressive disorder or any mental health problem, to cope with difficult emotions or to temporarily change their mood.

The most precipitating factor of substance use in this study was peer influence and the test of association between these precipitating factors and substance use behavior was statistically significant. This is in keeping with the finding of Dodge et al. [19] who found that the influence of peers on substance users often exists in the form of deviant peer relationship and this is positively correlated with substance use. It is possible that a shared inclination to use drugs attracts deviant individuals to form groups or that, in order to gain social standing or join a group, individuals are motivated to use substances and thus form a deviant peer group [20].

CONCLUSION

The study offered some insight into the potential relevance of the socio demographic characteristics to the development of substance use in North East Nigeria. This information will be useful for intervention measures aimed at stemming the tide of drug abuse in this region of the country.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this paper.

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