International Journal of Emergency Mental Health and Human Resilience, Vol. 18, No.4, pp. 1, ISSN 1522-4821

Treatment Needs for Psychoactive Substance Use Disorders among Outpatients with Severe Mental Illness (SMI): A Comparative Study

Sowunmi OA*, Onifade PO, Ogunwale A

Neuropsychiatric Hospital, Aro Abeokuta, Ogun, Nigeria

ABSTRACT: ***Introduction:*** *Research has shown that persons with schizophrenia and bipolar affective disorder constitute a significant proportion of patients with severe mental illnesses who have a risk of substance use disorders. There are few previous studies directly comparing level of risk for drug related adverse treatment outcomes and treatment needs for substance use disorders in these two disorders. The aim of the present study was to compare level of risk and treatment needs for substance use disorders between patients with schizophrenia and those with bipolar affective disorder.* ***Methods:*** *Equal number of participants (n = 75 per group) with SCHIZ and BAD at the outpatient clinic of the Neuropsychiatric Hospital Aro were interviewed with a socio-demographic questionnaire and the Alcohol smoking and substance involvement screening test (ASSIST).* ***Result:*** *Patients with bipolar disorder had higher risk for adverse effects of pain medication use, while schizophrenia patients had higher risk of adverse effects of tobacco, cannabis, stimulants, alcohol and sedatives. Age, sex, marital status and level of education had significant associations with elevated risk for psychoactive substance use disorders.* ***Conclusions:*** *Adverse treatment outcomes related to psychoactive substance use among individuals with severe mental disorders remain a burden in patient care. Routine screening for substance use at the out-patient department should evaluate risk for adverse effects of these substances and not only substance dependence.*

Keywords: *Schizophrenia, Bipolar disorder, Treatment needs, Substance abuse, Drug abuse, Assist, Intervention needs*

INTRODUCTION

Psychotropic drugs which include psychoactive substances do not only have therapeutic purposes but they can be abused and they can cause major public health problems (Stahl, 2013). These problems may be categorized into non-problematic use, problematic use and severe substance use disorder which manifest as criminal acts, risky sexual behaviour, legal issues and sometimes health complications like lung cancer, stroke, hepatitis, liver cirrhosis (DuRant, Smith, Kreiter & Krowchuk, 1999; MacPherson, Mulla & Richardson, 2006).

The consequent health, social and economic burden require primary, secondary and tertiary preventions with a comprehensive approach to the identification of treatment needs as proposed by McAlpine in persons presenting with problems caused by the use of any psychoactive substance (Legislative & Library, 2006). Furthermore, research has shown that persons with severe mental illness like schizophrenia and bipolar affective disorder share a larger percentage of the problem burden (Ringen et al., 2008).

Several surveys have been conducted on drug use/abuse prevalence (Miller, Busch & Tanenbaum, 1989; Fela-Thomas, 2014; Obot, 1990; Atilola, Ayinde & Adeitan, 2013; Abayomi et al., 2012; Makanjuola, Abiodun & Sajo, 2014; Zisook et al., 1992), few have been done to determine the forms of treatment needs for drug use but none has compared the treatment need in severe mental illnesses such as schizophrenia and bipolar affective disorder (in Nigeria. This study aims to determine and compare the appropriate treatment needs for all categories of psychoactive substance use disorders in patients with severe mental illness (Saunders et al., 1993).

METHODS

Seventy five out-patients with schizophrenia and 75 out-patients with BAD at the outpatient clinic of the Neuropsychiatric Hospital Aro were interviewed with a socio-demographic questionnaire, MINI international neuropsychiatric interview PLUS to confirm the diagnoses of schizophrenia and BAD and Alcohol smoking and substance involvement screening test (ASSIST) Version 3.1 to determine the treatment needs of these patients. Ethical approval was obtained from the research and ethics committee of the hospital and permission was obtained from the managing consultants. Consent was obtained from all participants and attention of the managing consultant was drawn to their patients who had problems with psychoactive substance. Data analysis was done using statistical package for social sciences version 21.

RESULTS

Socio-demographic Variables

As shown in Table 1, the mean ages of respondents in both diagnostic groups were not significantly different (t= 0.29; p= 0.77).

The gender distribution of respondents with schizophrenia were significantly different from participants with bipolar affective disorder ($\chi 2 = 6.004$; p=0.01) with significantly more males with schizophrenia than females with BAD. The rest of the socio-demographic variables were not statistically different in both diagnostic groups.

Levels of Risk

Levels of risk from psychoactive substance use among both diagnostic groups are depicted in Table 2. It was observed that a larger proportion of participants with bipolar affective disorder had moderate to high risk of adverse effect of pain medication (16%) when compared to participants with schizophrenia (14.7%) thus needing more brief intervention for this form of drug use or referral for long term treatment when compared to participants with

*Correspondence regarding this article should be directed to: sowunmioladipo@yahoo.com

Table 1.
Socio-demographic characteristics of respondents

Variables	Schizophrenia (N) (%)	Bipolar (N) (%)	X2	Df	P
Age (Years)			**X2**	**Df**	**P**
≤ 40 (Young Aged Adult)	49 (65.3%)	53 (70.7%)	0.49	1	0.48
<40 (Middle And Old Aged Adult)	26 (34.7%)	22 (29.3%)			
Age Range (S.D.)	18-59 (9.99)	18-63 (10.29)			
Gender			**X2**	**Df**	**P**
Male	46 (61.3%)	31 (41.3%)	6.004	1	0.01
Female	29 (38.7%)	44 (58.7%)			
Marital Status			**X2**	**Df**	**P**
Never Married	38 (50.7%)	31 (41.3%)	1.374	2	0.5
Married	26 (34.7%)	32 (42.7%)			
Separated/Widowed/Cohabiting	11 (14.7%)	12 (16.0%)			
Level of Education			**X2**	**Df**	**P**
No Formal/Primary Education	11 (14.7%)	16 (21.3%)	1.141	2	0.56
Secondary Education	31 (41.3%)	28 (37.3%)			
Tertiary Education	33 (44.0%)	31 (41.3%)			
Tribe			**X2**	**Df**	**P**
Major	69 (92%)	70 (96%)	1.064	1	0.3
*Minor	6 (8%)	5 (4%)			
Religion			**X2**	**Df**	**P**
Christianity	52 (69.3%)	50 (66.7%)	0.123	1	0.726
Islam	23 (30.7%)	25 (33.3%)			
Employment Status			**X2**	**Df**	**P**
High Socio-Economic	40 (53.3%)	43 (57.3%)	0.504	2	0.77
Middle Socio-Economic	25 (33.3%)	21 (28.0%)			
Low Socio-Economic Status	10 (13.3%)	11 (14.7%)			
*Akwa-Ibom, Oredo, Ashan, Edo, Koji, Ogaja, Ijaw.					

schizophrenia. This difference was not statistically significant (stat, p value). However, with regards to tobacco (16%), cannabis (10.7%), stimulants (12%), alcohol (9.3%), sedative (2.7%) and at least any psychoactive substance (32.7%), participants with schizophrenia had a larger proportion of respondents with moderate to high risk of adverse effects from these psychoactive substances when compared to participants with bipolar affective disorder thus needing more brief intervention for drug use or referral for long term treatment. The observed differences in the two diagnostic groups were not statistically significant and can be seen in Table 2.

Table 2.
Level of risk from psychoactive substance use

Variables	Schizophrenia N (%)	Bipolar N (%)			
Any Substance			**X2**	**Df**	**P**
Any Substance Low	58 (77.3)	61 (81.3)	0.37	1	0.55
Moderate/High	17 (32.7)	14 (18.7)			
Tobacco			**X2**	**Df**	**P**
Low	63 (84.0)	67 (89.3)	0.92	1	0.34
Moderate/High	12 (16.0)	08 (10.7)			
Alcohol			X2	Df	P
Low	68 (90.7)	69 (92.0)	0.08	1	0.77
Moderate/High	7 (9.3)	6 (8.0)			
Cannabis			**X2**	**Df**	**P**
Low	67 (89.3)	70 (93.3)	0.76	1	0.38
Moderate/High	8 (10.7)	5 (6.7)			
Stimulants			**X2**	**Df**	**P**
Low	66 (88.0)	68 (90.7)	0.28	1	0.6
Moderate/High	9 (12.0)	7 (9.3)			
Sedatives			**X2**	**Df**	**P**
Low	73 (97.3)	74 (98.7)	0.34	1	0.56
Moderate/High	2 (2.7)	1 (1.3)			
Pain Medications			**X2**	**Df**	**P**
Low	64 (85.3)	63 (84.0)	0.05	1	0.82
Moderate/High	11 (14.7)	12 (16.0)			

Relationship between Level of Risk and Demographic Variables

Irrespective of diagnosis those who were young aged adults were more likely to have a moderate to high risk of adverse effect of tobacco, cannabis, stimulants and pain medication. However, middle-aged and elderly adults with a diagnosis of Bipolar Affective Disorder (BAD) were more prone to moderate to high risk of adverse effect (MHRAE) of alcohol while this was found among patients with schizophrenia who were young aged adults. Finally, being a young aged adult was significantly associated with having MHRAE of stimulant in participants with schizophrenia.

Irrespective of diagnosis those who were males were more likely to have a MHRAE of tobacco, alcohol and stimulants. However, males with a diagnosis of BAD were more prone to MHRAE of cannabis, pain medication and any psychoactive substance while their counterparts with a diagnosis of schizophrenia were females. Finally, being male was significantly associated with having MHRAE of tobacco and using at least one psychoactive substance in participants with BAD (Table 3).

In both diagnostic groups, those not having a partner were more likely to have a MHRAE of cannabis, stimulants and at least one psychoactive substance. However, those without partners with a diagnosis of BAD were more prone to MHRAE of tobacco, alcohol and pain medication while their counterparts with a diagnosis of schizophrenia were married. Finally, being without a partner was significantly associated with having MHRAE of pain medication and using at least one psychoactive substance in participants with BAD.

Irrespective of diagnosis those with tertiary education were more likely to have a MHRAE of stimulants and pain medication. This is also true for those that had below tertiary education with regards to cannabis use. However, those whose level of education were below tertiary and with a diagnosis of BAD were more prone to MHRAE of tobacco, alcohol and use of at least one psychoactive substance while their counterpart with a diagnosis of schizophrenia had tertiary education. Finally, level of education was not significantly associated with any substance use (Table 4).

Participants with BAD from the minor tribes were more likely to have a MHRAE of all psychoactive substance studied while their counterpart with schizophrenia from the minor tribes were more likely to have a MHRAE of alcohol, stimulants and pain medication and the major ethnic groups were more prone to MHRAE of tobacco, cannabis and at least one psychoactive substance use. Ethnicity was however not significantly associated with any of the psychoactive substance (Table 5).

Irrespective of diagnosis those who practiced Islam were more likely to have a MHRAE of tobacco and at least one psychoactive substance. This is also true for those of the Christian faith and pain medication. However, those that practiced Islam with a diagnosis of BAD were more prone to MHRAE of alcohol, cannabis and stimulants while their counterparts with a diagnosis of schizophrenia were Christians. Finally, religion was not significantly associated with any substance use.

DISCUSSION AND CONCLUSION

This study found that participants with schizophrenia were more prone to MHRAE of psychoactive substances except for pain medication. These characteristics have been brought to light by this study's evaluation of risk effect of psychoactive substance used by participants as opined by an earlier study (Ringen et al., 2008) and emphasizes the need to evaluate risk effect and not just dependence or abuse in drug addiction research.

Contrary to the findings of a previous study (Ringen et al., 2008) participants diagnosed with schizophrenia were more prone to MHRAE of alcohol use when compared to those that had BAD. This observation has been reported by previous results (Farrell et al., 1998). The proposed reason for this difference is believed to be the euphoric and stimulatory effect of alcohol on patients diagnosed with schizophrenia when compared to other diagnostic group (Ringen et al., 2008; Farrell et al., 1998; D'Souza et al., 2006).

Table 3.
Tobacco, alcohol risk and socio-demographic variables

Tobacco										
Variable	**Schizophrenia**					**Bipolar Affective Disorder**				
	Low	**Moderate/High**	**X^2**	**Df**	**P**	**Low N %**	**Moderate/High N %**	**X^2**	**Df**	**P**
Age										
Young Aged Adult	39 (79.6)	10 (20.4)	1.20	1	1.00*	47 (88.7)	6 (11.3)	0.00	1	1.00
Middle and Old Aged Adult	24 (92.3)	2 (7.7)				20 (90.9)	2 (9.1)			
Sex										
Male	38 (82.6)	8 (17.4)	0.01	1	0.93	24 (77.4)	7 (22.6)	5.88	1	0.02
Female	25 (86.2)	4 (13.8)				43 (97.7)	1 (2.3)			
Marital Status										
With A Partner	23 (88.5)	3 (11.5)	0.19	1	0.66	31(96.9)	1 (3.1)	2.09	1	0.15*
Without A Partner	40 (81.6)	9 (18.4)				36 (83.7)	7 (16.3)			
Educational Status										
Tertiary	27 (81.8)	6 (18.2)	0.98	1	0.32	29 (93.5)	2 (6.5)	0.38	1	0.54*
Below Tertiary	36 (85.7)	6 (14.3)				38 (86.4)	6 (13.6)			
Ethnicity										
Major Tribes	57 (82.6)	12 (17.4)	0.29	1	0.59*	65 (90.3)	7 (9.7)	0.12	1	0.73*
Minor Tribes	6 (100)	0 (0)				2 (66.7)	1 (33.3)			
Religion										
Christianity	44 (84.6)	8 (15.4)	0.00	1	1.00*	45 (90)	5 (10)	0.00	1	1.00*
Islam	19 (82.6)	4 (17.4)				22 (88)	3 (12)			
Employment										
Employed	34 (85)	6 (15)	0.06	1	0.80*	39 (90.7)	4 (9.3)	0.01	1	0.95*
Not Employed	29 (82.9)	6 (17.1)				28 (87.5)	4 (12.5)			
Alcohol										
Age										
Young Aged Adult	42 (85.7)	7 (14.3)	2.58	1	0.11	50 (94.3)	3 (5.7)	0.48	1	0.49
Middle & Old Aged Adult	26 (100)	0 (0.0)				19 (86.4)	3 (13.6)			
Sex										
Male	40 (87)	6 (13)	0.97	1	0.33*	27 (87.1)	4 (12.9)	0.78	1	0.38*
Female	28 (96.6)	1 (3.4)				42 (95.5)	2 (4.5)			
Marital Status										
With A Partner	23 (88.5)	3 (11.5)	0.00	1	0.95*	32 (100)	0 (0)	3.14	1	0.07*
Without A Partner	45 (91.8)	4 (8.2)				37 (86)	6 (14)			
Educational Status										
Tertiary	28 (84.8)	5 (15.2)	1.29	1	0.26*	31 (100)	0 (0)	2.93	1	0.08
Below Tertiary	40 (95.2)	2 (4.8)				38 (86.4)	6 (13.6)			
Ethnicity										
Major Tribes	63 (91.3)	6 (8.7)	0.00	1	1.00*	67 (93.1)	5 (6.9)	0.32	1	0.57*
Minor Tribes	5 (83.3)	1 (16.7)				2 (66.7)	1 (33.3)			
Religion										
Christianity	47 (90.4)	5 (9.6)	0.00	1	1.00*	47 (94)	3 (6)	0.20	1	0.65
Islam	21 (91.3)	2 (8.7)				22 (88)	3 (12)			
Employment										
Employed	36 (90)	4 (10)	0.00	1	1.00*	41 (95.3)	2 (4.7)	0.65	1	0.42
Not Employed	32 (91.4)	3 (8.6)				28 (87.5)	4 (12.5)			
* = Yate Correction										

Table 4.
Cannabis, stimulants risk and socio-demographic variables

Cannabis										
Variable	**Schizophrenia**					**Bipolar Affective Disorder**				
	Low	**Moderate/High**	**X^2**	**Df**	**P**	**Low N %**	**Moderate/High N %**	**X^2**	**Df**	**P**
Age										
Young Aged Adult	42 (85.7)	7 (14.3)	1.00	1	0.32*	49 (92.5)	4 (7.5)	0.00	1	1.00*
Middle and Old Aged Adult	25 (96.2)	1 (3.8)				21 (95.5)	1 (4.5)			
Sex										
Male	43 (93.5)	3 (6.5)	1.17	1	0.28*	28 (90.3)	3 (9.7)	0.17	1	0.68*
Female	24 (82.8)	5 (17.2)				42 (95.5)	2 (4.5)			
Marital Status										
With A Partner	24 (92.3)	2 (7.7)	0.05	1	0.83*	31 (96.9)	1 (3.1)	0.35	1	0.55*
Without A Partner	43 (87.8)	6 (12.2)				39 (90.7)	4 (9.3)			
Educational Status										
Tertiary	30 (90.9)	3 (9.1)	0.00	1	0.99*	29 (93.5)	2 (6.5)	0.00	1	1.00*
Below Tertiary	37 (88.1)	5 (11.9)				41 (93.2)	3 (6.8)			
Ethnicity										
Major Tribes	61 (88.4)	8 (11.6)	0.04	1	0.85*	3 (100)	0 (0)	0.00	1	1.00*
Minor Tribes	6 (100)	0 (0)				70 (93.3)	5 (6.7)			
Religion										
Christianity	46 (88.5)	6 (11.5)	0.00	1	1.00*	47 (94)	3 (6)	0.00	1	1.00*
Islam	21 (91.3)	2 (8.7)				23 (92)	2 (8)			
Employment										
Employed	37 (92.5)	3 (7.5)	0.33	1	0.57*	42 (97.7)	1 (2.3)	1.64	1	0.20*
Not Employed	30 (85.7)	5 (14.3)				28 (87.5)	4 (12.5)			
Stimulants										
Age										
Young Aged Adult	40 (81.6)	9 (18.4)	3.83	1	**0.04***	47 (88.7)	6 (11.3)	0.23	1	0.63*
Middle and Old Aged Adult	26 (100)	0 (0)				21 (95.5)	1 (4.5)			
Sex										
Male	39 (84.8)	7 (15.2)	0.51	1	0.48*	26 (83.9)	5 (16.1)	1.68	1	0.20*
Female	27 (93.1)	2 (6.9)				42 (95.5)	2 (4.5)			
Marital Status										
With A Partner	24 (92.3)	2 (7.7)	0.21	1	0.64*	31 (96.9)	1 (3.1)	1.42	1	0.23*
Without A Partner	42 (85.7)	7 (14.3)				37 (86)	6 (14)			
Educational Status										
Tertiary	27 (81.8)	6 (18.2)	1.21	1	0.27*	28 (90.3)	3 (9.7)	0.00	1	1.00*
Below Tertiary	39 (92.9)	3 (7.1)				40 (90.9)	4 (9.1)			
Ethnicity										
Major Tribes	61 (88.4)	8 (11.6)	0.00	1	1.00*	66 (91.7)	6 (8.3)	0.20	1	0.66*
Minor Tribes	5 (83.3)	1 (16.7)				2 (66.7)	1 (33.3)			
Religion										
Christianity	45 (86.5)	7 (13.5)	0.04	1	0.84*	46 (92)	4 (8)	0.02	1	0.89*
Islam	21 (91.3)	2 (8.7)				22 (88)	3 (12)			
Employment										
Employed	36 (90)	4 (10)	0.05	1	0.83*	40 (93)	3 (7)	0.17	1	0.68*
Not Employed	30 (85.7)	5 (14.3)				28 (87.5)	4 (12.5)			
* = Yate Correction										

Table 5.
Pain Medication, any substance risk and socio-demographic variables

Pain Medication										
Variable	**Schizophrenia**					**Bipolar Affective Disorder**				
	Low	**Moderate/High**	**X^2**	**Df**	**P**	**Low N %**	**Moderate/High N %**	**X^2**	**Df**	**P**
Age										
Young Aged Adult	40 (81.6)	9 (18.4)	0.81	1	0.37*	43 (81.1)	10 (18.9)	0.49	1	0.48*
Middle and Old Aged Adult	24 (92.3)	2 (7.7)				20 (90.9)	2 (9.1)			
Sex										
Male	40 (87)	6 (13)	0.03	1	0.87*	23 (74.2)	8 (25.8)	2.64	1	0.10*
Female	24 (82.8)	5 (17.2)				40 (90.9)	4 (9.1)			
Marital Status										
With A Partner	22 (84.6)	4 (15.4)	0.00	1	1.00*	30 (93.8)	2 (6.3)	3.95	1	**0.04***
Without A Partner	42 (85.7)	7 (14.3)				33 (76.7)	10 (23.3)			
Educational Status										
Tertiary	28 (84.8)	5 (15.2)	0.00	1	1.00*	26 (83.9)	5 (16.1)	0.00	1	1.00*

Below Tertiary	36 (85.7)	6 (14.3)				37 (84.1)	7 (15.9)			
Ethnicity										
Major Tribes	59 (85.5)	10 (14.5)	0.00	1	1.00*	61 (84.7)	11 (15.3)	0.00	1	1.00*
Minor Tribes	5 (83.3)	1 (16.7)				2 (66.7)	1 (33.3)			
Religion										
Christianity	44 (84.6)	8 (15.4)	0.00	1	1.00*	41 (82)	9 (18)	0.00	1	1.00*
Islam	20 (87)	3 (13)				22 (88)	3 (12)			
Employment										
Employed	34 (85)	6 (15)	0.01	1	0.93	38 (88.4)	5 (11.6)	1.43	1	0.23
Not Employed	30 (85.7)	5 (14.3)				25 (78.1)	7 (21.9)			
Any Substance										
Age										
Young Aged Adult	35 (71.4)	14 (28.6)	2.81	1	0.09	42 (79.2)	11 (20.8)	0.16	1	0.69*
Middle and Old Aged Adult	23 (88.5)	3 (11.5)				19 (86.4)	3 (13.6)			
Sex										
Male	36 (78.3)	10 (21.7)	0.68	1	0.81	22 (71)	9 (29)	3.74	1	**0.04**
Female	22 (75.9)	7 (24.1)				39 (88.6)	5 (11.4)			
Marital Status										
With A Partner	21 (80.8)	5 (19.2)	0.27	1	0.61	30 (93.8)	2 (6.3)	5.67	1	**0.01**
Without A Partner	37 (75.5)	12 (24.5)				31 (72.1)	12 (27.9)			
Educational Status										
Tertiary	24 (72.7)	9 (27.3)	0.71	1	0.40	26 (83.9)	5 (16.1)	0.22	1	0.64
Below Tertiary	34 (81)	8 (19)				35 (79.5)	9 (20.5)			
Ethnicity										
Major Tribes	53 (76.8)	16 (23.2)	0.00	1	1.00*	59 (81.9)	13 (18.1)	0.00	1	1.00*
Minor Tribes	5 (83.3)	1 (16.7)				2 (66.7)	1 (33.3)			
Religion										
Christianity	39 (75)	13 (25)	0.53	1	0.47	41 (82)	9 (18)	0.00	1	1.00*
Islam	19 (82.6)	4 (17.4)				20 (80)	5 (20)			
Employment										
Employed	31(77.5)	9 (22.5)	0.00	1	0.97	37 (86)	6 (14)	1.48	1	0.23
Not Employed	27 (77.1)	8 (22.9)				24 (75)	8 (25)			

Participants with schizophrenia were more prone to MHRAE of stimulants, sedatives and tobacco use and this finding has been reported in a previous study (Ringen et al., 2008) but were however contrary to a couple of previous studies (Farrell et al., 1998; Mueser et al., 2000; Brookes et al., 2015) that reported no difference with respect to psychiatric diagnosis. These authors opined that clinical factors like negative symptoms, type of medication, duration of hospital stay and rehabilitation plan may have contributed to the patient's quality of life which in turn contributed to the use of these psychoactive substances and ultimately their adverse risk. This is a possible explanation to the difference observed in this study when compared to studies that showed no difference between psychiatric diagnoses.

The finding of higher risk of adverse effects with pain medication in participants with BAD when compared to those diagnosed with schizophrenia has been reported in a previous study (Ringen et al., 2008). The authors opined that patients might self- medicate in relation to their symptoms. The depressive phase of bipolar disorder may present with somatic symptoms (sometimes of a painful nature) which may explain why participants diagnosed with BAD may have used more pain medication and thus have presented with higher risk of adverse effects than those with a diagnosis of schizophrenia (Ringen et al., 2008). Cannabis has been reported as a risk factor for psychosis with increasing accumulation of evidence for schizophrenia in particular (Arseneault, Cannon, Witton & Murray, 2004). This probable differential substance vulnerability is a possible explanation for the higher adverse risk seen in relation to cannabis use in participants with schizophrenia when compared with patients with BAD.

With respect to socio-demographic characteristics, this study observed that irrespective of diagnosis, participants that were young age adults, from the minority tribes in Nigeria, males, with no marital partners and with lower than tertiary education level were more likely to be prone to have MHRAE of psychoactive substances. This has been reported in previous studies (Ringen et al., 2008; Fela-Thomas, 2014) which have suggested that one possible reason is the study population within which the psychoactive substance use was investigated. This is so because certain substances are more likely to be seen among outpatients (Ringen et al., 2008; Farrell et al., 1998). Another explanation is that drug abuse/dependence among persons with severe mental illness contributes to higher rates of admission and mortality, so that older inpatient and outpatient samples of patients are less likely to have ever had a drug use disorder.

Notably, young aged adults were significantly associated with stimulant use in participants with schizophrenia. Earlier results (Ringen et al., 2008; Farrell et al., 1998) are in keeping with this finding and opinions propagated are related to the early onset of the illness in schizophrenia and the need to medicate the effect of cognitive decline seen in schizophrenia. Furthermore, males are more likely to have more aggressive and thrill seeking behaviors with less negative effect of psychoactive substance use when compared to their female counterpart (Farrell et al., 1998). The observation that participants without partners demonstrated a higher proportion of those with MHRAE associated with pain medication is comparable to previous studies (Ringen et al., 2008; Farrell et al., 1998). It appears that the society within which the study was conducted is more tolerant of psychoactive substance use among singles thus explaining this association (Farrell et al., 1998).

The present findings were obtained in a sample from the outpatient department of the Neuropsychiatric Hospital Aro. This makes the data more representatives for these patient populations than other studies that included inpatients. The inclusion of inpatients may have provided data from a less stable patient population, thereby including the impact of drug use related to acute exacerbations

seen in emergency ward studies. The patient selection criteria are not without some biasing effect; the study has excluded clinically unstable patients and there could be a possible over-representation of chronic cases in this sample of patients receiving specialized treatment.

This study has shown the need for routine toxicology at the outpatient department of mental health facilities and a need to train mental health professional in the use of ASSIST. Tobacco and pain medication (tramadol) were observed to be the most injurious among participants with schizophrenia and BAD respectively. The need to psycho-educate patient on the adverse effect of psychoactive substance use and the need for immediate intervention cannot be overemphasized. Finally, future studies should investigate the biological relationship of the adverse effect observed so that a possible cause may be found.

REFERENCES

Stahl SM. (2013). Essential Psychopharmacology: Neuroscientific basis and practical applications. (3rdedn). Cambridge university press, *943*, p .1011.

DuRant, R.H., Smith, J.A., Kreiter, S.R., Krowchuk, D.P. (1999). The relationship between early age of onset of initial substance use and engaging in multiple health risk behaviors among young adolescents. *Arch Pediatr Adolesc Med,153*(3), 286–291.

MacPherson, D., Mulla, Z., Richardson, L. (2006). The evolution of drug policy in Vancouver, Canada: Strategies for preventing harm from psychoactive substance use. *International Journal of Drug Policy,* p. 127–132.

Legislative, M., Library, R. (2006). Estimating the need for treatment for. 612–625.

Ringen, P.A., Lagerberg, T.V., Birkenaes, A.B., Engn, J., Faerden, A., Jónsdottir, H., et al. (2008). Differences in prevalence and patterns of substance use in schizophrenia and bipolar disorder. *Psychol Med*, *38*(9), 1241–1249.

Miller, F.T., Busch, F., Tanenbaum, J.H. (1989). Drug abuse in schizophrenia and bipolar disorder. *Am J Drug Alcohol Abuse*, *15*(3), 291–5.

Fela-Thomas, A.L. (2014). A survey of treatment needs for psychoactive substance use among people attending a primary health care centre in Abeokuta. Dissertation submitted to the West African College of Physicians, Faculty of Psychiatry in part fulfillment of the requirements for them.

Obot, I.S. (1990). The use of tobacco products among Nigerian adults: a general population survey. *Drug Alcohol Depend, 26*(2), 203–208.

Atilola, O., Ayinde, O., Adeitan, O. (2013). Beyond prevalence and pattern: Problematic extent of alcohol and substance use among adolescents in Ibadan South-west Nigeria. *Afr Health Sci*, *13*(3), 777–784.

Abayomi, O., Ojo, T., Ibrahim, N., Adelufosi, A., Obasan, A. (2012). Prevalence and correlates of substance use among persons with mental disorders in a Nigerian Psychiatric Hospital. *African J Drug,* 11.

Makanjuola, A., Abiodun, O., Sajo, S. (2014). Alcohol and Psychoactive Substance Use Among Medical Students of the University of Ilorin, Nigeria. *Eur Sci J*, *10*(8), 69–83.

Zisook, S., Heaton, R., Moranville, J., Kuck, J., Jernigan, T., Braff, D., et al. (1992). Past substance abuse and clinical course of schizophrenia. *Am J Psychiatry*, *149*(4), 552–553.

Saunders, J.B., Aasland, O.G., Babor, T.F., De La Fuente, J.R., Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption--II. *Addiction*, *88*(6), 791–804.

Farrell, M., Howes, S., Taylor, C., Lewis, G., Jenkins, R., Bebbington, P., et al. (1998). Substance misuse and psychiatric comorbidity: An overview of the OPCS national psychiatric morbidity survey. *Addict Behav*, *23*(6), 909–918.

D'Souza, D.C., Gil, R.B., Madonick, S., Perry, E.B., Forselius-Bielen, K., Braley, G., et al. (2006). Enhanced sensitivity to the euphoric effects of alcohol in schizophrenia. *Neuropsychopharmacology*, *31*(12), 2767–2775.

Mueser, K.T., Yarnold, P.R., Rosenberg, S.D., Swett, C., Miles, K.M., Hill, D., et al. (2000). Substance use disorder in hospitalized severely mentally ill psychiatric patients: prevalence, correlates, and subgroups. *Schizophr Bull*, *26*(1), 179–192.

Brookes, R.L., Hollocks, M.J., Khan, U., Morris, R.G., Markus, H.S. (2015). The Brief Memory and Executive Test (BMET) for detecting vascular cognitive impairment in small vessel disease: a validation study. *BMC Med*, *13*(1), 290.

Arseneault, L., Cannon, M., Witton, J., Murray, R.M. (2004). Causal association between cannabis and psychosis: Examination of the evidence. *British Journal of Psychiatry*, p. 110–117.