Prevalence and Pattern of Drug Abuse among Patients Admitted to Tanka Tanka Psychiatric Hospital in the Gambia

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Abstract

Background: Psychoactive substance abuse constitutes social problems and it is a major public health concern all over the world. There is a global surge in the menace of drug abuse. Drug abuse has been reported as co-morbid condition among patients with mental disorders. In Sub-Saharan Africa, high rates of substance use have been reported among persons presenting for psychiatric evaluation in mental health facilities. There is rarity of studies in this subject matter at the psychiatric facility in the Gambia. This study was undertaken to determine the prevalence and pattern of psychoactive substance use among patients admitted to Tanka Tanka Psychiatric Hospital in the Gambia.

Methodology: The study employed a descriptive cross-sectional design to elicit information on drug abuse among in-patients at Tanka Tanka Psychiatric Hospital. After Ethical approval from HREC of EFSTH, 116 patients who consented and satisfied the inclusions criteria were recruited to complete Questionnaire containing sections on Socio-demographic, Drug Abuse and Clinical Profile. Data were analyzed using Stata MP 17. Descriptive statistics were used to summarize demographic characteristics, patterns of drug use, clinical profiles, physical and behavioral presentations, and other relevant variables. Frequencies and percentages were used to describe categorical variables, while means and standard deviations (SD) were computed for continuous variables.

Results: Out of the 116 patients that participated in the study, 69.8% were males. The mean (SD) age of the patients was 35(10.7) years. Majority (42%) were unemployed while 52.6% were single. Most of the patients (70,7%) initiated drug use within 15-19 years of age. Lifetime prevalence of any drug use was 100%. Substance use was predominantly a male affair with proportion of male users over twice greater than for females. Among current active users, tobacco was the highest (94.0%), followed by cannabis (61.2%), kush (22.4%) and alcohol (20,7%). Substance induced psychosis (71.6%) was the predominant diagnosis and the most common physical and behavioural signs were self-neglect (68.1%) and aggression (63.8%) respectively. Almost 80% of the patients had multiple admissions into the psychiatric facility.

Conclusion: This study has shown a very high prevalence rate of substance use among patients presenting at the Tanka Tanka psychiatric hospital with a high rate of substance induced psychiatric illness. Routine screening for substance use should be part of mental health service package for patients presenting at the facility. Establishment of drug abuse rehabilitation services in the facility and other locations in the Gambia should be accorded priority for effective tackling of the menace of drug abuse through collaboration of all relevant stakeholders.

Keywords

Drug abuse, Admitted Patients, Tanka Tanka Psychiatric Hospital, The Gambia.

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Introduction

The use of drugs for social rather than prescribed medical reasons has been well documented and this was also reported in 2016 by Onofa et al., [1]. The United Nations World Drug Report Estimated that 1 in 20 adults or a quarter of billion people between the ages of 15 and 64years, used at least one psychoactive substance in the last decade out of which over 39million people worldwide suffered from drug use disorder [2].

Drug abuse which is also referred to as psychoactive substance abuse constitutes a global health and social problem and it is a major public health problem all over the world [3].

Drug Abuse cut across geographical, cultural, socioeconomic, religious and ethnic boundaries with conditions and problems that vary broadly. Many societies, families and individuals are affected by drug abuse directly or indirectly. The right use of drug is imperative to health while drug abuse bring about detrimental effects [4].

A drug is a chemical substance with an intrinsic property to induce changes in the biological function of a living organism [5]. Drug changes how a living organism works [6]. Psychoactive drugs have the capacity to modify perception, mood, cognition, behavior and the general body functions [7].

Drugs are used to treat, cure, prevent or diagnose a disease or promote well-being. With the passage of time, herbs, leaves and plants have been used to heal and control diseases which have contributed substantially to therapeutic success because many drugs that are used today were developed directly or indirectly from these sources [8]. Naturally occurring plants like opium, coca and cannabis among others have been used over many years for their medicinal properties [9]. Generally speaking, the use of drug itself is not harmful to man in that when a drug is correctly administered in the right dose, through the right route and for the right indications has shown to be beneficial to man, however, when a drug is used for a purpose and in a manner other than what it is prescribed for, then that drug is being abused [10].

Drug abuse is generally on the rise in the world today especially among the youths and adolescents and this constitutes a big problem because many lives, careers, homes and families have been destroyed due to the menace of drug abuse [11].

Social problems such as crime, delinquency, family disintegration, cultism, 'area boys' phenomenon, armed robbery, assault, murder, job losses, and unfulfilled academic ambitions have been found to be associated with drug abuse in most West African countries [1,12,13].

The pattern of drug abuse varies from one region to another. The main drug of abuse are opiates in Europe and Asian countries, cocaine in South America and cannabis in Africa while other drugs like alcohol, nicotine, amphetamine, hypnosedatives, solvents and stimulants are being increasingly used [14].

Drug abuse has been reported as co-morbid condition among patients with mental disorders. A prevalence of 24% co- morbidity rate was obtained among hospitalized patient in Israel [15], 40-84% co-morbidity rate had been reported among psychiatric patient in the UK, Australia and in the US [16].

In Sub-Saharan Africa, high rates of substance use have been reported among persons presenting for psychiatric evaluation in mental health facilities, for instance in Tanzania, the prevalence rate of substance use in psychiatric population was 68.5% [17] and 74% in South African psychiatric facility [18]. In Nigeria, two studies on the use of psychoactive substances in mentally ill individuals showed prevalence between 21.3% and 29.3% [19,20].

Statistics from the only psychiatric hospital, Tanka Tanka psychiatric hospital in The Gambia showed that about 60% of their admission cases were drug induced psychosis [21].

Drug abuse has been part of the major health problems being addressed by the authority in The Gambia and this is affecting individuals' mental health and causes a huge damage to the social and economic fibers of the nation. Apart from cannabis which is the most abused illicit drug in The Gambia, The Gambia has served as tourist center and transition zone for all kind of psychoactive drugs. Statistics from drugs seizure reveal the presence of other forms of controlled and prohibited drugs like cocaine, heroin, clonazepam, diazepam stimulants, cough syrup and others [21]. The high co-morbidity rate of 60% reported among patients admitted to Tanka Tanka Psychiatric Hospital with predominant youth involvement has remained a major source of concern [21].

The pattern of drug abuse varies from place to place, hence the need to establish the pattern of use peculiar to the main public facility for mental health care in The Gambia. There is rarity of study in this field in The Gambia; hence the current one will complement the body of literature on drug abuse among psychiatric patients in The Gambia. Establishing the pattern of drug abuse will enable policy makers to implement policies that will ensure strict surveillance on accessibility and use of these drugs.

The study aims to determine the prevalence and pattern of psychoactive substance use among patients receiving treatment at the Tanka Tanka Psychiatric Hospital in the Gambia.

Methodology

The Study was conducted at Tanka Tanka Psychiatric Hospital. The Tanka Tanka Psychiatric Hospital is the only psychiatric in-patient facility, located in the Western Region of the country. It was built in 2009 by a Dutch non-governmental foundation organization (NGO), Tanka Tanka Foundation, on land donated by the President of the Gambia. There are separate wards for male and female patients. The in-patients capacity of the hospital is 150 bed spaces.

This hospital-based study employed a descriptive, cross-sectional design to elicit information on drug abuse among in-patients at Tanka Tanka Psychiatric Hospital. The study population were the patients admitted to Tanka Tanka psychiatric hospital who met inclusion criteria and provided informed consent to participate in the study.

Sample size was estimated using Leslie – Kish – formula for single proportion [22].

Sample size $\quad$ n= $\dfrac{z\alpha^2 pq}{d^2}$

P is the prevalence of substance abuse among patients admitted to the Tanka Tanka Psychiatric Hospital. P = 60% [21]

$\quad$ P = 0.6

$\quad$ q = 1-P $\quad$ = 1-0.6

$\quad\quad$ =0.4

Zα = 1.96 (for 5% level of significance) is standard normal deviate

d= the precision of the study and for this study a precision of 5% (0.05) is chosen

Hence sample size n = $\dfrac{(1.96)^2 \times 0.6 \times 0.4}{(0.05)^2}$

$\quad\quad\quad$ = 368.8

$\quad$ Sample Size $\quad$ = 369

Finite Population Correction for population less than 10.000 using the formula below [23]

$\quad$ n = $\dfrac{no}{1+ \dfrac{(no-1)}{N}}$

no = Sample size = 369
N = Total Bed Occupancy = 150
n = Adjusted Sample size

n = $\dfrac{369}{1 + \dfrac{(369-1)}{150}}$

$\quad\quad$ = $\dfrac{369}{3.4533}$

=107 patients

Correcting for attrition, inconsistent and missing data, the study on psychoactive substance use among in-patients in a Nigerian Neuropsychiatric hospital obtained 86% as data completion rate [20].

So the final sample size

n = 107 × $\dfrac{100}{86}$

$\quad$ = 125 Patients

Sampling Procedure

The total bed space occupancy of the hospital is 150. A simple random sampling of all consenting patient on admission was adopted. The sampling considered only patients that satisfied the inclusion criteria for the study. The sample size of the study is 125 and this comprises both male and female patients on admission.

Study Instrument

A questionnaire used by Abdulfatai Bakare & Isah Balarabe in the study of psychoactive substance use among psychiatric patients in Nigeria in 2016 was used for this study [25].

The questionnaire contains sections on Socio-demographic profile such as age, gender, occupation, marital status, educational level; Drug use profile containing information on types of drug abuse, age of first use, lifetime use, past year use, use in the one month prior to admission, currently using, duration of use prior to presentation, urine test toxicology results; Clinical profile which include clinical diagnosis, number of previous admissions, physical signs at presentation, behavioural signs at presentation, family history of mental illness. Forensic section elicits information on previous arrest by law enforcement agencies, detention in the prison, crime committed, being charged to court and other items on forensic issues.

Additional information was extracted from the patients' case files, clinical history, mental status examination, physical examinations and urine toxicology results.

Two Research Assistants were recruited and trained on the instrument administration.

A pilot study was conducted among psychiatric patients attending the out-patients clinic of the Edward Francis Small Teaching Hospital (EFSTH), Banjul. Using recommended 10% size of the final study [22], 13 patients participated in the pilot study. The capability and adequacy of the questionnaire, time to complete the questionnaire, understanding of the questionnaire were assessed at the pilot phase before commencing on the main study.

Data Analysis

Data were analyzed using Stata MP 17 (StataCorp, 2021). Descriptive statistics were used to summarize demographic characteristics, patterns of drug use, clinical profiles, physical and behavioral presentations, and other relevant variables. Frequencies and percentages were used to describe categorical variables, while means and standard deviations (SD) were computed for continuous variables. The demographic characteristics of participants included gender, age, occupation, marital status, and level of education. Age was reported as a continuous variable using mean and standard deviation, while other variables were summarized using frequencies and percentages. Patterns of drug use were assessed based on lifetime use, age of initiation, and recent use (in the past one year and one month before admission).

Each substance's prevalence was computed using the proportion of participants who reported ever using the drug. Mean age of initiation was calculated for each drug type.

Clinical diagnosis data were categorized into drug-induced psychosis, schizophrenia, and mood disorders. Frequency distributions were computed for each diagnostic category. Participants' histories of previous hospital admissions were also summarized using frequencies. Medication compliance was categorized as poor, fair, or good and analyzed using percentages. The presence or absence of a family history of drug abuse was also reported. Physical and behavioral signs at presentation were recorded as binary variables (Yes/No) and analyzed using frequency and percentage distributions. These signs included indicators such as poor hygiene, sleep disturbance, neglect of self-care, talkativeness, restlessness, and coordination problems, as well as behavioral indicators like irritability, irrational behavior, aggression (verbal and physical), hallucinations (visual and auditory), and depression. A p-value less than 0.05 was accepted as significant for each statistical test.

Ethical Considerations
Ethical approval was duly obtained from Human Research Ethics Committee of Edward Francis Small Teaching Hospital (EFSTH) with Reference Number: EFSTH-REC-2025-43. Informed consent of all participating patients was obtained. The patients were free to opt out of the study at any point. International ethical norms and standards were strictly adhered to during the study. Confidentiality was ensured as the questionnaire did not contain the names of the participants or any means of identification.

Results
A total of 116 patients admitted to Tanka Tanka Hospital participated in the study (92.8% response rate). The socio-demographic characteristics of the patients are presented in table1. The mean age of participants was 35.0 years (SD = 10.7), with ages ranging from 18 to 62 years. Majority of the participants (59.5%) were aged 39 years or younger. Males constituted a larger proportion of the study population, accounting for 69.8% (n = 81), while females represented 30.2% (n = 35). Regarding occupational status, 36.2% of participants were unemployed while over half of the patients (52.6%) were single. Approximately one-third (29.3%) had completed primary education, followed by 26.7% and 10.3% who had attained secondary and tertiary education respectively. Additionally, 11.2% reported having Quranic education.

The results presented in table 2 showed that all study participants (100%; n = 116) reported having used at least one psychoactive substance during their lifetime. The age of initiation into drug use varied among participants. The majority (70.7%) began using drugs between the ages of 15 and 19 years.

Table 1: Demographic Characteristics of study respondents.

Variables	Frequency n=116	Percent
Gender		
Male	81	69.8
Female	35	30.2
Age - Mean (sd)	35 (10.7)	min=18- max=62
Age range		
<= 39 years	69	59.5
>=40 years	47	40.5
Occupation		
Self-employed	28	24.1
Employed	36	31.0
Unemployed	42	36.2
Retired	10	8.6
Marital Status		
Single	61	52.6
Married	37	31.9
Divorced/widowed	18	15.5
Highest Educational Level		
No formal Education	7	6.0
Primary education	34	29.3
Junior secondary	19	16.4
Secondary education	31	26.7
Tertiary education	12	10.3
Quranic education	13	11.2

Table 2: Drug Use Among Participants.

Use of Any drug	Frequency (n)	Percent (%)
Yes	116	100
No	0	0
Age range at first use of any drug		
10-14 years	12	10.3
15-19 years	82	70.7
>=20	17	14.7
>=30 years	5	4.3

Table 3 presents the drug use pattern among the participants. The most reported substances used in participants' lifetime were cigarettes, cigars, or other tobacco products, with 99.1% reporting ever using these products with mean age at first use at 17.0 years (SD = 5.4), and recent use was also high, with 94.0% of the participants reporting use of these substances in the past year and the same proportion in the month prior to admission. Cannabis and cannabis-related products were reportedly used by 67.2% of the participants in their lifetime with an average initiation age of 18.2 years (SD = 3.1). Among the participants, 55.2% used cannabis in the past one year, and 61.2% reported use in the one month prior to admission to the hospital. Alcohol was ever used by 50.9% of the participants, with a mean age at first use of 20.0 years (SD = 6.2). Among those who had ever used alcohol, 32.8% reported use in the past year, and 20.7% used it in the month preceding hospital admission.

Kush and Kush like products were used by 26.7% of the participants

with a mean age of initiation of 25.5 years (SD = 5.9). Also, use of these products was reported by 25% of the participants in the past one years while 22.4% used Kush and related products in the one-month preceding admission. The use of amphetamine, heroin and cocaine was not popular among the participants with less than 1% reporting use of each of these products in the one month prior to admission while 31% used Shisha in their lifetime but none was current active user of Shisha.

Only 2.6% of the participants used hypnosedatives like diazepam in the preceding month to their admission. Mitrenar, the fictitious drug was used to check for over reporting. None of the participants reported using Mitrenar.

Table 3: Pattern of Drug Use Among Study Participants.

Variables	Ever Used in Lifetime –n (%) N=116	Age at first use in Years - Mean (sd)	Used within One Year before admission n(%) N=116	Use in the Past One Month before admission n(%) N=116
Alcohol	59 (50.9)	20 (6.2)	38(32.8)	24(20.7)
Cigarettes/ Cigar /Tobacco Products	115(99.1)	17.0 (5.4)	109 (94.0)	109 (94.0)
Cannabis/Cannabis Products	78 (67.2)	18.2 (3.1)	64 (55.2)	71 (61.2)
Kush/Kush Products	31(26.7)	25.5 (5.9)	29 (25.0)	26 (22.4)
Shisha	36(31.0)	25.6 (9.0)	19 (16.3)	0
Amphetamine, Ice, Ecstasy, Chinese capsule	23 (19.9)	22.5 (4.9)	7 (6.0)	1 (0.9)
Tramadol	1(0.9)	32	1 (0.9)	1 (0.9)
Heroine	1(0.9)	32	1 (0.9)	1 (0.9)
Cough Syrup + codeine	0	0	0	0
Cocaine	3 (2.6)	30 (3.0)	1 (0.9)	0
Diazepam, Valium, Rohypnol, Mogadon etc	6 (5.2)	25.1 (3.5)	4 (3.4)	3 (2.6)
Solvents like glue, paint, petrol, Nail polish etc	5 (4.3)	21.7 (4.0)	0	0
Mitrenar	0	0	0	0

As shown in Table 4, the lifetime prevalence of use of any substance was 100%. Psychoactive substance was predominantly a male affair with the proportion of male substance users far greater than those for females apart from solvents where more females used than males. Almost equal proportion of males and females smoked tobacco. The proportion of males who reported use of cannabis, alcohol, amphetamine and kush was over twice the proportion of females who used these substances.

The clinical profile of the participants was present in Table 6. Among the 116 patients admitted to Tanka Tanka Hospital, 71.6% were diagnosed with substance induced psychosis while 12.1% had the diagnosis of schizophrenia.

Table 4: Lifetime Prevalence of Substance among the Participants.

Variables	All n (%) n=116	Male n (%) n=81	Female n (%) N=35
Any Substance	116(100)	81(100)	35(100)
Alcohol	59 (50.9)	48(59.3)	11(31.4)
Cigarettes/ Cigar /Tobacco Products	115(99.1)	80(98.8)	35(100)
Cannabis/Cannabis Products	78 (67.2)	67(82.7)	11(31.4)
Kush	31(26.7)	29(35.8)	2(5.7)
Shisha	36(31.0)	33(40.7)	3(8.6)
Amphetamine, Ice, Ecstasy, Chinese capsule	23 (19.9)	20(24.7)	3(8.6)
Tramadol	1(0.9)	1(1.2)	0(0)
Heroine	1(0.9)	1(1.2)	0(0)
Cough Syrup + codeine	0	81(100)	35(100)
Cocaine	3 (2.6)	3(3.7)	0(0)
Diazepam, Valium, Rohypnol, Mogadon etc	6(5.2)	6(7.4)	0(0)
Solvents like glue, paint, petrol, Nail polish etc	5(4.3)	3(3.7)	3(8.6)
Mitrenar	0	3(100)	3(100)

As shown in Table 5, only 10 out of the 116 participants (8.6%) had undergone urine drug toxicology screening. Among those who were tested (n = 10), 4 participants (40.0%) had a positive screen result to tetrahydro-cannabinoid (THC).

Table 5: Urine Drug Toxicology Screening among the participants.

Variables	Frequency (n=116)	Percent (%)
Has patient done Urine Drug Toxicology		
No	106	91.4
Yes	10	8.6
If Urine Drug Toxicology done, was result positive/negative?		
No	6	60
Yes	4	40

In terms of service utilization, 33.6% had been admitted once in the past while 11.2%had three previous admissions 17.2% reported having multiple previous admissions, indicating a pattern of recurring hospitalizations associated with their mental health and substance use conditions. Regarding medication adherence among the study participants, a majority (80.2%) reported good compliance with their prescribed medications. In terms of familial patterns of substance use, a significant proportion of the participants (70.7%) reported a family history of drug abuse.

At the time of hospital admission, various physical signs were observed among the patients, and these are presented in table 7. Poor hygiene was present in 57.8% of the participants while nearly half of the participants (49.1%) reported experiencing poor sleep. Self-neglect was reported in 68.1% with close to 60% presenting with talkativeness. Restlessness was reported in 66.4% and redness of the eyes, a common physical indicator associated with certain drug use, was noted in 33.6% of the patients.

Table 6: Clinical profile of the participants.

Diagnosis of Patient	Frequency (n=116)	Percent (%)
Substance induced Psychosis	83	71.6
Substance abuse without Psychosis	7	6.0
Schizophrenia	14	12.1
Mood Disorders	8	6.9
Others	4	3.4
How many previous admission		
None	22	19.0
1	39	33.6
2	14	12.1
3	13	11.2
4	8	6.9
Many	20	17.2
Compliance with medications		
Poor	8	6.9
Fair	15	12.9
Good	93	80.2
Family History of Drug Abuse		
No	34	29.3
Yes	82	70.7

Table 7: Physical Signs at Hospital Presentation.

Variables	Frequency (n=116)	Percent (%)
Poor hygiene		
No	49	42.2
Yes	67	57.8
Poor sleep		
No	59	50.9
Yes	57	49.1
Neglect of self- care		
No	37	31.9
Yes	79	68.1
Talkativeness		
No	49	42.2
Yes	67	57.8
Restlessness		
No	39	33.6
Yes	77	66.4
Redness of eyes		
No	77	66.4
Yes	39	33.6
Poor physical coordination		
No	108	93.1
Yes	8	6.9

Several behavioral signs were documented at the time of admission among the 116 patients as depicted in table 8. Irritability was observed in 56.9% of the patients with 55.2% manifesting irrational behavior at the time of evaluation. Violent behavior was reported in 42.2% of the patients. Similarly, verbal aggression was observed in 63.8% of the patients with 35.3% showing physical aggression. Auditory and visual hallucinations were experienced by 62.1% and 48.3% of the participants respectively.

Table 8: Behavioral Signs at Hospital Presentation.

Variables	Frequency (n=116)	Percent (%)
Irritability		
No	50	43.1
Yes	66	56.9
Irrational behavior		
No	52	44.8
Yes	64	55.2
Violence		
No	67	57.8
Yes	49	42.2
Verbal aggression		
No	42	36.2
Yes	74	63.8
Physical aggression		
No	75	64.7
Yes	41	35.3
Depressive symptoms		
No	89	76.7
Yes	27	23.3
Visual hallucination		
No	60	51.7
Yes	56	48.3
Auditory hallucination		
No	44	37.9
Yes	72	62.1

Discussion

This study found a very high lifetime prevalence rate of 100% which is one of the highest in the West-African sub-region. The highest was for tobacco (99.1%), followed by cannabis (67.2%), alcohol (50.9%) and kush/kush like products in 26.7% of the patients. Current active users of drugs in the previous month preceding admission showed the highest prevalence with use of tobacco (94%), and this was followed by cannabis (61.2%), kush/kush related products (22.4%) and alcohol use (20.7%). Similarly, high rates of substance abuse have been reported among psychiatric patients. In Sub-Saharan Africa, high rates of substance use have been reported among persons presenting for psychiatric evaluation in mental health facilities [17].

In Tanzania, the prevalence of substance abuse was reported to be 68.5% among psychiatric patients [17] and 74% prevalence rate was reported in a South-African psychiatric facility [18] and 82.9% among patients seen at Neuropsychiatric hospital Aro, Abeokuta [24].

In a study conducted among in-patients in a Nigeria neuropsychiatric hospital in northern Nigeria, the findings showed that the lifetime prevalence of substance use among the patients on admission was 69.2%. Active abuse of drugs (during the last month prior to admission) was 41%. The study further revealed that cannabis was the commonest illicit drug of abuse

[25]. The prevalence rates of substance use obtained in this study are higher than findings from most studies in this region. There have been various hypotheses put forward to explain the complex relationship between mental disorders and substance use [26]. These are the self-medication hypothesis (persons with mental disorders may use substances like nicotine to cope with psychotic experiences) [27] and shared -vulnerability hypothesis (common factors predisposing to both substance use disorders and mental illness [28].

Tobacco was the most frequently used substance followed by cannabis, alcohol and kush. Alcohol had been reported as most widely used drugs among psychiatric in-patients [24] which is non-congruent with our study that reported tobacco as the most frequently used substance. This is understandable in the context of the religious background of the Gambians as about 95% are Muslims and Islam has restriction on alcohol use. A similar pattern of substance use was also reported by Abdulfatai and his colleagues at their study of substance use among psychiatric in-patients in Northern Nigeria where they are predominantly Muslims [25]. Our study also reported the use of kush, which is a potent synthetic drug combining cannabis with opiods like fentanyl, tramadol, formaldehyde and ground human bones. Kush abuse has led to public health crisis in the Gambia. Since early 2024, the Gambia has witnessed a surge in kush-related cases, predominantly among adolescents and youths especially males aged 14 to 23 years with case fatality rate of 9.4% (gambiadailiy.gov.gm).

The availability of inexpensive forms of these drugs, inadequate enforcement of policies regulating their use and relative social acceptability make them widely available in the West African sub-region including the Gambia [29].

Our study also reported that over 70% of the patients-initiated drugs use between 15-19years. Studies on psychiatric patients in the Gambia indicated that the initiation of drug abuse typically occurs during adolescence, often between ages 15-19 years [30]. Similar ages of initiation were reported in Nigeria [14-18,31], Ghana (15-19years) [32], Sierra Leone (15-19 years) [33] and Senegal (15-19 years) [34]. The consistent initiation age of 15-19 years across West African countries indicates adolescence as a crucial period of drug abuse prevention. Targeted interventions during this period, especially within psychiatric settings, can reduce progression to chronic use disorders. Our study also found that substance use was predominantly a male affair and this finding is congruent with studies conducted on drug abuse in the Africa continent [1,8,11,12,20,25].

Urine drug toxicology was reportedly carried out by only a minority of the patients. Treatment of patients admitted to Tanka Tanka psychiatric hospital is graciously made free by the government of the Gambia. However, urine toxicology is done in the outside laboratory where they have to make payment. So, it's a possibility that financial constraint would have limited conduction of the investigation.

Among the diagnosis, substance induced psychosis was the commonest followed by schizophrenia and mood disorders. The association between cannabis and psychotic illness may explain the high prevalence among patients presenting at neuropsychiatric facilities for treatment [29]. The pattern has been reported in literatures [24,25]. The high prevalence of substance induced psychosis carries a huge mental burden with several implications for mental health care, public health policy and social support system. Another factor that would have affected the diagnosis is lack of use of standard instrument for making these diagnoses coupled with the fact that there is shortage of consultant psychiatrist, so, some of the diagnoses were made by other mental health professional. Some drugs like cocaine and heroin had low prevalence as their use was not popular. A similar trend was reported in studies in Nigeria [25]. The low prevalence could be due to affordability as these drugs are expensive and accessibility could be a major limiting factor.

Among the patients, about 80% have had at least one previous admission with about 20% reporting at least four previous admissions. Substance abuse could lead to revolving door effect with patients being repeatedly admitted, leading to chronic occupancy and burnout of staff. At the Tanka Tanka psychiatric hospital, there are no specialized addictions services offered to patients hence most of the patients never get to receive specialist' addiction treatment. The need to have drug abuse rehabilitation centre would be appropriate to address the increasing prevalence of drug abuse in the Gambia. There should be coordinated, collaborative efforts from the ministry of health, Drug Law Enforcement Agency of the Gambia and all relevant stakeholders.

It was also reported among the patients with drug abuse of having relatives with drug use problems. This could be possibly be due to genetic factor and positive drug role model in the family of people with drug use problems Among the patients that presented at the emergency unit for admission, the commonest physical signs were self-neglect and poor hygiene while aggression and hallucinatory behavior were prominent behavioral signs. These physical and behavioural signs among psychiatric patients at presentation for treatment had been reported in previous studies [25,35] and these indicate several clinical, diagnostic and management implications.

Limitations

The study has its limitations. It is a hospital base cross-section study for which causal relationship cannot be established. An objective way of determining substance use is through urine drug toxicology with only a minority under the drug screening test. There could be a huge discrepancy between biological testing and self-report of drug use. Diagnoses of patients were made by mental health professionals without confirming the diagnoses with the use of standardized instruments. Notwithstanding these limitations, the study has its strength has it has focused on under-studied population with substance use problem which has a major public health importance for the entire country of the Gambia.

Conclusion

This study has shown a very high prevalence rate of substance use among patients presenting at the Tanka Tanka psychiatric hospital with a high rate of substance induced psychiatric illness. Routine screening for substance use should be part of mental health service package for patients presenting at the facility. Establishment of drug abuse rehabilitation services in the facility and other locations in the Gambia should be accorded priority for effective tackling of the menace of drug abuse through effective coordination and collaboration between the ministry of health, Drug Law Enforcement Agency of the Gambia and all relevant stakeholders.

Appreciations

References

1. Onofa LU, Adamson T, IghorojeM, Majekodunmi M. Prevalence and Pattern of Drug Abuse among Students of Tertiary Institutions in Abeokuta, Ogun State, Nigeria. Int J Psychiatry. 2016; 1: 1-6.

2. Drugs UNODC, Crime World Drug Report 2016: United Nations Publications. 2016.

3. United Nations Office on Drug and Crime. World Drug report 2015. United Nations Publications. 2015.

4. WHO Expert Committee on Drug Dependence. Geneva. Twenty-third Report. Tech. World Health Organization technical report series no. 741. 1986.

5. Okoye NN. The adolescents and hard drugs: A psychological concern in R.U.N. 2001.

6. World Health Organization Report. 2016.

7. Balogun SK. Chronic intake of separate and combined alcohol and nicotine on body maintenance among albino rats. J. Hum. Ecol. 2006; 19: 21-24.

8. Oluremi DF. Drug Abuse among Nigerian Adolescents strategies for counseling. Journal of International Social Research. 2012; 5: 342-347.

9. Wolmer C. Drugs in England, London. Wayland Publishers Limited. 1990.

10. The World Drug Report 2006: Working together for health. 2006. www.who.int-

11. Ongwae MN. Causes and Effects of Drug and Substance Abuse among students in selected secondary schools in Starehe sub county Nairobi County. 2016; 1.

12. Adamson TA, Malomo IO. Psychosocial profiles of armed robbers in Bendel State, Nigeria. Nigerian Med. J. 1991; 21: 41-44.

13. Ekpo M, Adelekan ML, Inem AV, Agomoh A, Agboh S, Doherty A. Lagos Area Boys and Girls in rehabilitation their substance use and psychosocial profiles. East Afr Med J. 1995; 72: 311-316.

14. World Drug Report 2023. United Nations Office on Drugs and Crime. 2023. www.unodc.org-

15. Gregory R, Rimona D, Emi S, Racheal Bar. Substance abuse in hospitalized psychiatric patients. Isreal Medical Association Journal. 2008; 10: 672-675.

16. Adrian Davis, Patrick McMaster, Daniel C. Christie, Anes Yang, Jeffrey S. Kruk, et al. Psychiatric Comorbidities of Substance Use Disorders: Does Dual Diagnosis Predict In-Patient Detoxification Treatment Outcomes. International Journal of Mental Health and Addiction. 2022; 21: 3785-2799. https://doi.org/10-1007/511469-022-00821-1

17. Kiyeti A Hauli, David M Ndetei, Mary B Jande, Rodrick Kabangila. The prevalence of substance use among psychiatric patients. The case study of Bagando Medical Centre Mwanza (Northern Tanzania). Subst Abus. 2011; 32: 238-241.

18. Weich L, Pienaar W. Occurrence of co-morbid substance use disorder among acute psychiatric in-patients at Stikland Hospital in the Western Cape South Africa. Afr. J Psychiatry. 2009; 12: 213-217.

19. Okpataku CI, Kwinshie HO, Olisah VO, Ejiofor JI. Prevalence and sociodemographic risk factors associated with psychoactive substance use in psychiatric out-patients of a tertiary hospital in Nigeria. Niger Med J. 2014; 55: 460-464.

20. Sowunmi OA, Amoo G, Onifade PO, Adegboyega Ogunwale, Emmanuel Babalola. Psychoactive substance use among out-patients with severe mental illness A Comparative Study. S Afr J Psychiatr. 2019; 25: 1-7.

21. Drug Law Enforcement Agency of the Gambia. 2017. www.dleag-gambia.org-

22. Lackey NR, Wingate AL, Brink PJ, Wood MJ. The pilot study One key to research success. Advanced Design in Nursing Research. 1998; 375-386.

23. Israel GD. Determining Sample Size 1. University of Florida. 1992; 1-5.

24. Adegoke Oloruntoba Adelufosi, Timothy Olaolu Adebowale, Olukayode Abayomi, Julianah Temilola Mosanya. Medication Adherence and Quality of Life among Nigerian out-patients with Schizophrenia. Gen Hosp Psychiatry. 2012; 34: 72-79.

25. Abdulfatai TB, Balarabe AI. Psychoactive substance use among in-patients in a Nigerian Neuropsychiatric Hospital Prevalence, Pattern and Presentation. MOJ Addict Med Ther. 2016; 2: 18-22.

26. Marshall E, Farrell M. Substance use and psychiatric comorbidity. Psychiatry. 2004; 3: 55-58.

27. Kessler RC, McGonagle KA, Zhao S, Nelson CB, Hughes M, et al. Lifetime and 12-month preva- lence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. Arch Gen Psychiatry. 1994; 51: 8-19.

28. Patel V. Alcohol Use and Mental Health in Developing Countries. Annals of Epidemiology. 2007; 17: 87-92.

29. Gureje O, Degenhardt L, Olley B, Uwakwe R, Udofia O, et al. A descriptive epidemiology of substance use and substance use disorders in Nigeria during the early 21st Century. Drug Alcohol Depend. 2007; 91: 1-9.

30. Musa Jallow, Melanie H, Jar Hargan, Marie-Claire Balaam. A Systemic review of identity key elements of effective public health interventions that address barriers to health services for refugees. Journal of Public health. 2022; 2561-2573.

31. Adelekan ML, Ndom R, Obayan A. Monitoring trends in Substance Use. Drugs: Education, Prevention and Policy. 2018; 3: 239-247.

32. Osei E. Substance use initiation in adolescents with mental health conditions in Ghana. Ghana Medical Journal. 2019; 53: 22-30.

33. Kamara A. Substance abuse and mental health among adolescents in Sierra Leone. Sierra Leone Journal of Psychiatry. 2020; 12: 15-23.

34. Diop B. Pattern of drug abuse among psychiatric patients in Senegal. Senegalese Journal of Public Health. 2017; 6: 99-105.

35. Gbolagade Amoo, Adefolakemi Temitope Ogundele, Abayomi Oluseye Olajide, FMCPsych, Maroh Great Ighoroje, Adedunmola Oluwaseun Oluwaranti, et al. Prevalence and pattern of psychiatric morbidity among community population. Journal of Geriatric Psychiatry and neurology. 2020; 33: 353-362.