Research Paper

Effect of Substance Use on Academic Performance among Undergraduate Students In The University Of Abuja, Nigeria

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ABSTRACT:- Studies have shown that alcohol, drug use and drug dependence have had major impacts on families, and workers'/students' productivity, performance, efficiency at the workplace and academics respectively. Also, antiques have it that many cultures have found ways of altering consciousness by the intake of substances. Ideally, proper handling of issues arising from substance use by university students will reflect on our nation's workforce. This paper therefore seeks to examine the effect of substance use on academic performance among undergraduates in the Nigerian universities. Full-time 300 and 400 level students were recruited for the study. The respondents were asked to indicate whether or not they had ever used any of the listed drugs in 30 days, one year and lifetime use. Study difficulty was measured using University College London Study Difficulty Questionnaire UCLSQ. Data collected were analysed using SPSS 16 and multivariate analysis of Variance and Fisher's exact test were used. The result showed that 323 (53.8%) of the study population had study difficulty. Of this, 76.7% who used one substance or the other had study difficulty. The study showed a correlation between academic performance and the use/ abuse of substance among Nigerian Undergraduate students at the University of Abuja. Observed also was that 83% of study population who used/abused psychoactive substances and had psychiatric morbidity and study difficulty had brain fag syndrome.

Keywords:- Academic performance, brain fag, study difficulty, substance use

I.   INTRODUCTION

In recent times, substance use and abuse has become a major issue in the workplace and has been seen among secondary school students (Abiodun, Adelekan, Ogunremi, and Oni, 1994; Adelekan,1989; Adelekanand Ndom, 1996) and among undergraduates (Adelekan, Abiodun Oni, Ogunremi1992;Adelekan, Abiodun,and Obayan et al 1993). Students who are under the influence of alcohol or other drugs or battling emotional problems are not going to be able to learn as well as students who devote their full attention to their education (Adelman & Taylor, 2003). It has been observed from studies that substance abuse may impair cognitive development which in turn reduces academic achievement and disrupts academic progression. Studies also have shown that heavy adolescent substance use can lead to problems working with memory and attention due to brain activities (Kelvin, Meehan et.al 2006) and school dropout (Monti, Miranda, Nixon et.al 2005). Studies have associated poor academic performance, students missing classes, difficulty in keeping up with academic responsibility, failing tests, dropping out of school due to poor grades with Alcohol. According to the study alcohol can have a secondary effect on academic performance of students whose peers drink by: taking care of a drunken friend and colleague who ordinarily may not be in a right frame at that state of being drunk and these caretakers possibly may become victim of assault by the drunken friend or colleague. Also, they may divert academic time to putting up with parties and cajoling their friends to join them (Higher Education Centre for Alcohol, Drug Abuse and Violence Prevention).

In as much as the use/abuse of drugs has become persuasive issues in recent decades, it is imperative to be acquainted with the fact that throughout history, almost every society has used psychoactive substances for medical, religious, or recreational purposes (Millman 1988, Weiss and Millman, 1989). They posit that the desire to enhance pleasure or performance and to alter one's consciousness, either with psychoactive substances

or by other means appears to be intrinsic and possibly psychobiologically based human needs. Peterson (1977), asserts that the use of some of these psychoactive substances like chewing the leaves or smoking the alkaline base form of the cocoa plant had been documented before the 6th century A.D. Ritual hallucinogen and cannabis use was recorded in India in about the second millennium and 7th century respectively(Aldrich, 1977). In some parts of Nigeria, some of the substances used were snuff, marijuana and tobacco.

II. REVIEW OF RELATED LITERATURES

2.1 Psychoactive Substances

Psychoactive substances have been defined by World Health Organisation as substances that, when taken in or administered into one's system, affect mental processes, e.g. cognition or affect (www.who.int/substance_abuse/terminology/psychoactive_substances/en). In other words, psychoactive substances can be referred to as chemical substances which when ingested, inhaled or injected into the body have the potential to alter mood, behaviour, perception or mental functioning of an individual. These substances could bring about changes in a person's emotional state, body functioning or behaviour. These psychoactive substances also exert their effects by modifying chemical or physiological processes in the brain (Berger, 2008; Okogbenin, 2008). These substances are categorized as either illicit (illegal) for example cannabis, cocaine and heroin or licit (legal) substances like alcohol, kola nuts, or coffee. Studies have shown that these substances are misused or abused by undergraduate students (Adelekan and Ndom, 1996;Daramola, 2004; Onofa, 2005). Over the years, the definition of psychoactive substance abuse has varied among researchers however operational definitions are now in place. The two internationally recognized definitions, which are similar in most aspects, are the Diagnostic and Statistical Manual of Mental Disorders (DSM IV; APA, 1994) and the International Classification of Diseases, tenth edition (ICD – 10 WHO, 1992).

DSM IV criteria for substance abuse defines it as "a maladaptive pattern of substance used leading to clinically significant impairment or distress as manifested by one (or more) of the following: Recurrent substance use resulting in a failure to fulfil major role obligations at work, school or home; recurrent substance use in situations in which it is physically hazardous, recurrent substance- related legal problems, and continual substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effect of the substance".

2.1.1 Socio-Demographic Correlates of Psychoactive Substance Use/Abuse

There is a general consensus that the abuse of psychoactive substances in Africa and other developing countries has been on the increase amongst youths (Pela 1988; Odejide 1980; Awaritefe and Ebie 1975; Asuni et al, 1994; Adelekan 1997; and Federal Ministry of Health 1991). This had led to a corresponding increase in research in this area, but its detrimental effects on studying have not received corresponding attention (Fatoye, 1998). Pela(1986) noted the increased involvement of females' gender in drug use, Aboidun et al, (1994), found that, in many cases of psychoactive substance abuse, about half of the students got initiated into it while in primary school, three quarters by early secondary school period. "Students many of whom are still in the formative years and in transition to adulthood phase are in period of experimental exploration and curiosity" (Pela 1986). They are particularly prone to the many destructive effects of psychoactive substances abuse, both physically and mentally, study difficulty inclusive. About 40-80% of Nigerian undergraduates were found to use alcohol (Ihezue 1988, Adelekan et al, 1993;Daramola, 2004). In a 30-country survey project in which Nigeria participated, Ibanga et al, (2005) noted that 32.5% of 2,099 respondents were drinkers. Onofa (2005) reported that 69.2% life time use of all drugs among undergraduate students of three higher institutions in Abeokuta, Western Nigeria.

It is likely that contemporary rural-urban drifts, shifts and breakdown in protective effect of the extended family system, socio-economic and psychosocial factors postulated by Adamson and Sijuwola in 2001 may have worsened the pattern of psychoactive substance abuse of the youths in Nigeria. Notably, the amphetamines are illegally imported into Africa (Ebie 1982). Their use is a problem commonly found among adolescents, especially students (Oshodi, 1973; Asuni and Pela, 1980; Ebie, 1982). Students use stimulants to keep awake during intense studying (Lambo, 1965, Adelekan et al., 1982). Labourers use them to fight fatigue, while farmers mostly in the Northern Nigeria use them both to fight fatigue and to suppress appetite during farming. Oshodi (1986) in his study of psychoactive substance abuse in Kaduna over a 3 year period noted that the abuse of amphetamine had assumed an epidemic proportion in the Northern part of Nigeria especially among soldiers, farmers, labourers and students.

2.1.2 Relationship between Psychiatric Morbidity and Psychoactive Substance Use/Abuse

The abuse of psychoactive substances poses serious consequences to the abusers, leading to students' wastage, dropout, financial loss and threat to societal well-being (Onofa, 2005). These are some of the notable consequences of psychoactive substance abuse. However some authors have associated drug abuse with different forms of psychiatric morbidity. Asuni in 1964 reported the development of schizophrenia-like

psychosis in abusers of cannabis. Paton and Kandel (1978) pointed out the association between drug use and depressive illness. Morakinyo (1983) and Pela (1986) reported the contributory effects of cannabis abuse to the development of psychiatric morbidity.

It has also been reported that an increasing number of students in secondary schools and universities present to psychiatric clinics and hospitals with psychological problems following psychoactive substance use (Ogunremi and Okonofua, 1977). In Lesotho, Mauritius, Mozambique, Namibia, the Seychelles and Swaziland, alcohol plays a significant role in treatment demand in both general and psychiatric hospitals. It was reported that 62% of the total admissions into psychiatric hospitals in Swaziland and 80% in Mauritius, were related to alcohol as primary psychoactive substance used (SACENDU, 2005). Also several studies have shown that alcohol is second only to cannabis as primary substance associated with admissions into Nigerian psychiatric hospitals (Ahmed1986, Obot and Olaniyi 1991; Ohaeri and Odejide 1993). It was noted that many of these admissions are for co-morbid conditions, where alcohol use disorders are part of the mix, so it is not clear how much role alcohol (or cannabis for that matter) plays in the psychiatric morbidity resulting in hospitalisation.

The WHO Global Burden for Disease project noted that high burden of alcohol is partly due to a strong link with depression (Rehm et al, 2004). In the general population, the co-morbidity of mental illness and drug use was studied in the United States of America; (Ragler et al, 1990) .The authors used interview technique to study 20,291 persons in the survey. Among those with alcohol abuse/dependence 37% had co-morbid mental disorder. Among those with mental disorder a lifetime prevalence of having some addictive disorder was 29% including over lapping of 22% with an alcohol and 15% with another drug disorder. A similar association was found in Connecticut, USA, in study by Merikangas and Gelernter, (1990) between alcoholism and depression. Breslau, in 1995, reported that "co morbidities of psychiatric disorders and psychoactive substance use disorders are more pervasive than previously suspected." The study further revealed that "males and females with nicotine dependence had increased odds for alcohol and illicit drug use, major depression and anxiety disorders compared with non-dependent smokers and non-smokers, increased odds for alcohol and illicit drug disorders were also observed in non-dependent smokers compared to non-smokers.

Abiodun et al, (1994) and Adelekan et al, (1993) in drug use surveys among secondary school students and university students in Ilorin Nigeria respectively showed significant correlations between mental ill health and the use of alcohol, cannabis and tobacco. Ononye and Morakinyo, (1994) studied 50 inmates of a remand home in South Western Nigeria for drug abuse, psychiatric morbidity and juvenile delinquency. A well matched comparison group of primary and secondary school students from the same geographical area was compared with the delinquent group. Both groups were subjected to the Carlson Psychological Survey (CPS) questionnaire. The questionnaire, which comprises 50 items, has basic content areas identified as follows; Chemical Abuse (CA) Thought Disturbance (TD), Antisocial Tendency (AT) and Self Depreciation (SD).For delinquency and comparison (non-delinquent) group, a significant positive association was reported between chemical abuse and psychiatric morbidity (as measured by self-depreciation and thought disturbance). Generally, prevalence studies have reported substance abuse in patients with psychiatric morbidity as ranging from 20% to 75%, while 25% to 65% of alcoholics entering rehabilitation suffer from another major psychiatric disorder (el-Guebaly, 1990). No difference was found between sexes. Forty two percent of students with academic difficulty were diagnosed as having psychiatric problems compared with 9% among academically successful students. Neurosis accounted for half of the case, while schizophrenia accounted for nearly a quarter. More psychiatric problems were recorded among third year students than the first year.

2.1.3 Study Difficulty

"Study difficulty can be defined as the impairment of the capacity to study effectively or inability to obtain maximal result from the effort put in the studying" (Morakinyo, 1990).The following have been identified as causes of study difficulty: Diminished motivation, impaired ability to concentrate, retain or recall, improper presentation of materials, faulty study pattern, poor budgeting of available time, difficulty in social adjustments to a new school environment, secondary effect of psychoactive substance use, personality related problems, neurotic conditions and psychotic disorders. "Study (work) difficulty has always been observed to form part of the symptomatology or signs of the broad spectrum of mental health problems which students present with. It may either be reported by the student himself or may be the only complaint by the teacher, parents, guardian or other significant person in the student's life. This is noteworthy, as the main pre-occupation of the student is studying. Apart from the fact that study difficulty is a common symptom or sign in students with mental health disorders, it is important also to note that it may lead to premature termination of the educational process and subsequent student wastage, in otherwise good and capable students" (Morakinyo, 1990).

2.1.4 Classification of study difficulty

Classifications of study difficulty have been reported by several scholars, notable among them are: Malleson (1957, 1965), Ryle (1969), Crown et al, (1973), Handforth (1978), James (1980), and Morakinyo (1990). Malleson (1957, 1965) initially recognised three types of study difficulty: Anxiety related, apathetic / withdrawal type and somatic symptoms related. However, in his second report, he subdivided study difficulty into primary and secondary categories. The primary was sub-classified into: obsessionality, disorganized, retention and recall difficulties, and production difficulties. While the secondary type was not sub classified, but was described, as due to personal problems.

Ryles (1965), subdivided study difficulty into: study difficulty associated with Psychiatric disturbances, and study difficulty not associated with psychiatric illness. The type associated with psychiatric disturbances was further sub-classified into 2; disorganised and dynamic types, in which interpersonal relationships with significant others play important role.

Crown et al, (1973), and James, (1980), concluded that study difficulty could be classified into: Psychoneurotic difficulties, motivational difficulties and a mixture of both psychoneurotic and motivational difficulties. Two major types of study difficulty, primary and secondary were identified by Handforth in 1978. He noted that primary type, is associated with poor study habits, counterproductive obsessiveness or poor budgeting of time, and in this, psychiatric diagnosis is inappropriate, while the secondary type is associated with both rare and relatively common conditions like: dyslexia, drug induced a motivational syndrome, schizophrenia, anxiety states, adjustment difficulties, depression , and developmental problems.

Morakinyo (1990) gave a comprehensive classification of study difficulty, which took into account many factors, which have been identified to be associated with study difficulty. The details are shown in Table 5.

2.1.5 Consequences of Psychiatric Morbidity In Relation To Study Difficulty

In a study of co-occurrence study difficulty, drug use and psychopathology among secondary school students (Fatoye 1998), he stated that "A notable consequence of psychopathology is school absence, which invariably impedes performance of students and may lead to drop out. Though the association between psychiatric morbidity and school absence with eventual dropping out of school may appear straight forward, the relationship of psychiatric morbidity and study difficulty may not be that simple" (Fatoye, 1998). Fatoye also noted that study difficulty may be a primary condition; however in many cases it is secondary to psychiatric morbidity of various types. (Morakinyo's Classification of study difficulty: Table 5). Whether primary or secondary, the eventual outcome is undesirable to the students, their families and the society in general.

2.2 Brain Fag Syndrome

A psychiatric syndrome which is related to study or intense academic (intellectual) work was reported by Raymond Prince in Nigeria in 1960. In that publication and in a subsequent one, he described the cluster of symptoms, which characterised the syndrome (Prince, 1962). He called, this syndrome, Brain Fag Syndrome due the belief by the affected students that their brains were fatigued. Morakinyo in 1990 stated that this syndrome is characterised by the following symptoms:

a.   Intellectual impairments, inability to grasp the meanings of materials read poor retention and recall, and difficulty with concentrating when reading.

b.   Unpleasant sensations like heat or burning sensations, pain aches, peppery sensations around the head and neck associated with study, either coming on when the student attempts intellectual activity or may be continuously present but worsens when study is attempted and other sensory disturbances like blurring of vision or just seeing blank.

c.   Fatigue and sleepiness in spite of adequate rest

d.   Affective disturbance which may not be present or be volunteered by the student,   but which may take the form of fear, anxiety and/or depression

The syndrome has since been reported in many parts of West Africa e.g. Liberia (Wintrob 1977), Sierra Leone (Thebaud and Rigamaer 1976) and Cote d'Ivoire (Lehmann 1977). It has also been reported from the other parts of Africa; South of Sahara and in students of African descent who were studying in the Western countries, but is rather rare among Caucasians. A debate as to why there should be this disparity in prevalence has ensued and some explanations have been offered. There have also been suggestions as to the mechanism of its occurrence, and even whether it should be regarded as a distinct entity on its own, or as an anxiety equivalent or depression equivalent, (Fatoye, 2004). Prince in 1980 has argued almost convincingly, that the condition could be regarded as a culture bound syndrome in view of its lop-sided distribution between African and European cultures.

III.   METHODOLOGY

This study was carried out in the university of Abuja Nigeria. It included 300 and 400 levelfull time students from all faculties and excluded 500 level law students. The sample size was 600. The data collected was analyzed with SPSS 16. Frequencies of the variables were computed to find out the actual substances used

by the respondents and the ages at which the first took the substances. Odds ratio was obtained and Fisher's exact test was used to test significance. P<0.05 was considered statistically significant.

We considered necessary to devise an index (measure) of the overall study difficulty. The simplest method that was chosen was to compute the students' overall scores on the various subscales of UCLSQ, and this was called, "the consolidated study difficulty" (CSD). A score above the median score for the CSD was regarded as indicating study difficulty in the respondent. It was used in order to simplify classification of the students' multiple scores, which would be cumbersome. Deriving and using these scores facilitated the categorical identification of respondents in the various sub-groups. Brain fag syndrome scale was used. For each item, there were three (3) responses, which are <u>Often, Sometimes,</u> and <u>Never,</u> relating to the presence or absence of symptoms. They assigned scores of 2, 1 and 0 respectively .The maximum score obtainable on the scale ranges from 0 to 14.The higher the score the higher the severity of the illness. The scale is designed to discriminate between "caseness" and "non-caseness". For caseness, two conditions must be satisfied. The respondent must have a minimum score of six (6) which must include a score one on each of items 4 and 5. These items deal with the presence of bodily symptoms such as crawling sensations or heat in the head and the interference of those bodily symptoms with studying.

IV. RESULT
4.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS
Two hundred and ninety five (49.2%) were males and 305 (50.8%) of the respondents were females. The male to female ratio (M: F) was 1: 1.03. This is comparable to that of the general population of the students with gender distribution ratio 1:1.05 of male to female. The age range of the respondents was from 18 to 41 years. The mean age for females was 22.4yrs (±2.93) while that of the males was 23.9 yrs (±3.39). There was a significant difference using independent sample t-test in the age distribution between the males and females respondents. (t = 5.52, d.f =7, P <0 .001).

4.2 PSYCHOACTIVE SUBSTANCES USE
4.2.1 Prevalence Rate of Psychoactive Substances Use: The prevalence rate of all drugs (current use) was 46%. The prevalence rate of all drugs (life-time use) 67.7% was significantly higher than the current use. On honesty questions, 85.7% and 86.0% of the respondents stated, that they would have admitted if they had ever used cannabis or heroin/opium respectively, 13.3% and 12.7% reported they would not have admitted to ever use cannabis and heroin/opium, while 1.0% and 1.3% were not sure if they would have admitted to the use of cannabis and heron/opium respectively.

The prevalence rates of use of all categories of drugs by students are shown on Table 3. Life time prevalence rate was highest for alcohol 57.3%, followed by stimulants (35.7%) and tobacco (24.0%). The least was opium/heroin with (1.7%). The previous year and 30 days prevalence rates followed similar pattern but the rates were lower than the life time use. Consolidated life-time use (that is, the prevalence of all categories of psychoactive substances) was 67.7%, while that of current use was 46%.

4.3 PSYCHIATRIC MORBIDITY
This was measured using GHQ – 30. The respondents' mean score was 4.09 (±3.31). The scores ranged from 0 to 22, the respondents that scored ≥5 were classified to be positive for psychiatric morbidity. A total of, 213 (35.5%) respondents were grouped as having psychiatric morbidity.

4.3.1 The Brain Fag Syndrome (BFS)
The frequency distribution of the Brain Fag syndrome scale scores showed that the scores ranged from 0 to 13. The mean score was 5.19 (±0.08). Scores of 6 and above and minimum of one score in items 4 and 5 were used as criteria for caseness. A total of 216 (36.0%) respondents met the requirement for caseness and were categorised as positive for BFS. Of the study population 83% who used/abused psychoactive substances and had psychiatric morbidity and study difficulty had brain fag syndrome. From table 4, 80% of respondents on Barbiturates and heroine respectively had brain fag syndrome.

4.3.2 Psychoactive Substances Commonly Abused by Students with Brain Fag Syndrome (BFS)
The findings in this study showed that alcohol, tobacco, stimulants and cannabis were commonly used psychoactive substances, by students with BFS, (P<0 .001.). Fatoye (1998) reported that Stimulants were the most commonly abused psychoactive substances by students with Brain Fag Syndrome. He noted that, the finding further reinforced the psycho physiological theory of Brain Fag syndrome (BFS) (Morakinyo 1980). However, in this study, Stimulants is third among the four most commonly used psychoactive substances (see tables 3 & 4).

4.4 PREVALENCE RATES OF STUDY DIFFICULTY AMONG THE RESPONDENTS

Anxiety: The median score of the respondents on Anxiety subscale was 8.00. A total of 306 (51%) respondents fell into this group and were termed as positive for Anxiety subscale. **Obsessionality:** For this subscale the median score was 8 and 353 (58.8%) respondents were positive for Obsessionality subscale. **Depression:** Respondents had median score of 7.00 on this subscale. A total of 298 (49.7 %) respondents were positive for Depression subscale of UCLSQ. **Disorganised / Distractible:** Respondents had the median score of 6. A total of 351 (58.5%) respondents were positive for Disorganised subgroup of UCLSQ. **Low motivation:** In this subscale respondents had median scores of 7.00 and 293 (48.8%) of these respondents were positive for this subscale. **Somatic:** Respondents median score in this subscale was 7.00. A total of 342 (57%) respondents were positive for somatic subscale. **Work Satisfaction**: The median score was 10.00. A total of 312 (54%) respondents were positive for this subscale. **Sylbism**: Respondents had median score of 10.00. A total of 318 (53.0%) of the respondents were positive for this subscale. Among the UCLSQ subscales, respondents recorded the highest mean score of 10.08 on the Work Satisfaction subscale, while the lowest mean score of 6.30 was recorded by the respondents in the Disorganised/Distractible subscale. The highest median of 10.00 was also recorded by the respondents in the Work Satisfaction and Sylbism subscales and the lowest median of 6.00 were recorded by the respondents in the Disorganised/Distractible subscale

4.4.1 Consolidated Study Difficulty: The median score for the consolidated study difficulty was 63.00. A total of 323 (53.8%) respondents were positive for this group.

V. DISCUSSION

5.1 Prevalence Rate of Psychoactive Substances Use:

The prevalence rate of all drugs (current use) was 46%. The prevalence rate of all drugs (life-time use) 67.7% was significantly higher than the current use. This is similar to 69.9%, reported by Onofa (2006), but lower than 88% and 85% reported by Akinhanmi (1996) respectively in his two phased study. However, the figure in this study was higher than that reported by Ihezue (1988) and Tawasu (2005), 56% and 23.7% among medical students of University of Nigeria, Nsukka and University of Maiduguri respectively. These differences might be accounted for, by differences in methodology, and criteria used in assessing drug use and contributions of cultural and religious factors.

We observed from our findings that some of the substances used by our respondents are Tobacco, Alcohol, Cannabis, Cocaine, Stimulants, Hallucinogens, Volatile solvents, Tranquilizers, Sedatives, Opium, Heroin and other Opiates. A minimum of 4 students and a maximum of 344 students had been on one form of substance use or the other which represents 0.66% and 57.33% respectively. The substance greatly used is alcoholic beverage which is represented by 57.33%.

The findings from the study showed that, all the psychoactive substances, namely Tobacco, Alcohol, Cannabis, Cocaine, Stimulants, Hallucinogens, Volatile solvents, Tranquilizers, Sedatives, Opium, Heroin and other Opiates were associated with Study difficulty in varied degrees. Using Fisher's Exact tests Tobacco, Alcohol, Cannabis, Cocaine and Stimulants had statistically significant (P <0.05) association with study difficulty. Measure of Agreements were statistically significant in association with Tobacco, Alcohol and Stimulants (P <0.05). Odds Ratios of those that use these psychoactive substances and those that do not use them were measured. All except Hallucinogens, Tranquilizers and Other Opiates had high Odds Ratio values (table 4).

The findings showed that all aspects of study difficulty had statistically significant association with psychoactive substance use, except Low motivation and Work satisfaction. The following according to Morakinyo's Classification of Study Difficulty (Table 5) were found to have statistical significant associations with psychoactive substance use: Primary and Secondary types of study difficulty, Anxiety, Obsession, Depression, Somatic, and Syllabism subscales of study difficulty (P <0.05). Measure of Agreement was statistically significant in association with Anxiety, Obsession, Depression, Somatic, and Syllabism subscales (see table 2).

TABLES

Table 1: Prevalence Rates Of Study Difficulty among the Respondents (N=600)

	Positive			Negative	
Variables	**N**	**%**	**Median**	**N**	**%**
Anxiety (ANX)	306	51	8.00	294	49
Obsessionality (OBS)	353	58.8	8.00	247	41.3
Depression (DEP)	298	49.7	7.00	302	50.3

Disorganised/ Distractible (DIS)	351	58.5	6.00	249	41.5
Low Motivation (L-MOT)	293	48.8	7.00	307	51.2
Somatic (SOM)	342	57.0	7.00	258	43.0
Work satisfaction (W-SAT)	312	52.0	10.00	288	48.0
Syllabism(SYL)	318	53.0	10.00	282	47.0
Consolidated Study difficulty (CSD)	323	53.8	163.00	277	46.2

Table 2: Specific aspects of study difficulty associated with psychoactive substance use and psychiatric morbidity

Study Difficulty	psychoactive substance		Psychiatric morbidity (current use)	
	P value	OR	P value	OR
Primary/Secondary	0.0001**	-	0.0001**	-
Anxiety	0.0001**	2.0	0.0001**	2.8
Obsession	0.0001**	0.8	0.0001**	3.0
Depression	0.0001**	2.1	0.0001**	2.4
Disorganised/ Distractible	0.115*	1.3	0.0001**	2.4
Low motivation	0.257*	0.8	0.174*	0.8
Work satisfaction	0.512*	0.9	0.459*	0.7
Syllabism	0.011**	1.5	0.0001**	2.1

*   PValue not significant (P>0.05)
**   P Value moderately significant (P<0.05)

Table 3: Prevalence rates of drug use among respondents (N=600)

Drug	Lifetime Use		Previous 12months use		Previous 30 days use	
	Frequency	%	Frequency	%	Frequency	%
Tobacco	144	24.0	102	17.0	84	14.0
Alcohol	344	57.3	274	45.7	206	34.3
Cannabis	87	14.5	73	12.2	54	9.0
Cocaine	29	4.8	25	4.2	16	2.7
Stimulants	214	35.7	202	33.7	179	29.8
Hallucinogens	22	2.7	13	2.2	9	1.5
Inhalants	67	11.2	43	7.2	30	5.0
Hypnosedatives	35	5.8	28	4.7	20	3.3
Barbiturates	10	1.7	6	1.0	6	1.0
Opium	10	1.7	7	1.2	5	0.6
Heroin	10	1.7	8	1.3	5	0.8
Other opiates	17	2.8	11	1.8	6	1.0

Table 4: Psychoactive Substances Most Commonly Associated With   Brain Fag Syndrome (BFS)

Psychoactive substance Life – time use	%	P. value
Tobacco	57.6	0.001***
Alcohol	45.0	0.001***
Cannabis	64.4	0.001***
Cocaine	58.6	0.045**

Stimulants	54.7	0.001***
Hallucinogens	54.5	0.048**
Volatile solvents	59.7	0.005**
Hypnosedatives	60.0	0.046**
Barbiturates	80.0	0.045**
Opium	60.0	0.05*
Heroin	80.0	0.05**
Other opiates	64.7	0.05**

*   **P. Value not significant (P>0.05) (Fisher's Exact test**
**   **P. Value moderately significant (P<0.05) Fisher's Exact test**
***   **P. Values highly significant (P<0.001) Fisher's Exact test**

Table 5: Morakinyo's Classification of Study Difficulty

Type	Sub type	Possible Underlying Factors
A. Primary No association with psychiatric illness	1. Educational/Psychological	(a) Deficient intellectual capacity (b) Impaired reading and comprehension ability (c) Retention – recall difficulties (d) Aptitude vocational in-congruencies (e) Poor study habit (e.g. poor time budgeting etc.)
	2. Motivational/Behavioural	(a) Disorganisation (b) Syllabus bound/syllabus free work manner (c) Low motivation (d) Poor concentration/distractibility
	3. Socio-Cultural	(a) Learning is second language and understanding alien constructs (reading-comprehension difficulties). (b) Attitude to education. (c) Loneliness and social deprivation (d) Adjustment and interpersonal difficulties. (e) Structural and dynamic characteristic of the education system and institution. (f) Community expectations and indebtedness. (g) Family events
	4. Psycho-Physiological	(a) Sensory deprivation (e.g. poor lighting in reading room, classroom or at home). (b) Exertion-exhaustion stress (c) Sleep deprivation
	5. Organic	(a) Perceptual disabilities (e.g. poor sight, hearing). (b) Head injury, dementia and other brain diseases. (c) Arrest or retardation of development and growth.
B. Secondary Associated with psychiatric disorders.	1. Personality related (a) Hysterical personality 2. Substance (drug) abuse or dependence related 3. Neurotic related (a) Somatic anxiety (b) Anticipatory or reactive phobia anxiety related to fear of failure and/or repeated failure (c) Neurasthenia (d) Adjustment disorder with work or academic inhibition DSM III, 309, 29	i. Easy extinction of conditioning/learning ii. Drug induced a motivational syndrome i. Concentration and comprehension impairment under drug influence i. Impairment of learning/performance due to hyperarousal ii. Interest disorder iii Socio-cultural factors iv Psycho-physical factors v. Social cultural factors as above

(e) Other neuroses in which study has special symbolic significance e.g. brain fag syndrome.	vi. Constitutional factors
4. Psychotic related	i. Aboulia
(a) Schizophrenia	ii. Interest disorder
	Constitutional factors

VI.   CONCLUSION

The findings in this study have shown that use of psychoactive substances is quite common among the senior students of University of Abuja, Nigeria. The most commonly used psychoactive substance is Alcohol, followed by Stimulants, Tobacco, Cannabis and Inhalants, while Hypnosedatives, Cocaine, other Opiates, Hallucinogens, Sedatives and Opium/Heroin were used in lesser degrees.

We observed that prevalence rates of psychiatric morbidity and Brain Fag Syndrome were 35.5% and 36.0% respectively, while that of consolidated study difficulty was 53.8%. This study associated substance use/abuse to study difficulty, brain fag syndrome and psychiatric morbidity. We therefore posit that the use/abuse of substances above mentioned in this study affect students' academic performance. We also recommend that schools and other Non- Governmental Organizations should intervene to reduce the use of substances among Nigerian students and those who are at risk of substance use.

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