

COMPARATIVE STUDY ON MULTIPLE DRUG USE AMONG STUDENTS AND NON-ACADEMIC STAFF OF NIGERIAN UNIVERSITIES

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ABSTRACT

This study assessed comparative multiple drug use among students and non-teaching staff of State Nigerian universities and the specific objectives including determining the significance of the association among different categories of drug users, ascertaining correlation of multiple drug use among students and non-academic staff, determining the factors responsible for multiple drugs and comparing drug usage among the sampled population were all achieved. The study randomly selected two State Universities and their respondents using simple random sampling .The sample size for this study were 500 respondents comprising 400 students and 100 non-academic staff. Primary data was used for the analysis collected through structured questionnaire. The result of the analysis showed that the association between drug user in the students category was not significant as $P=0.983 > 0.05$ falls under acceptance region of the null hypothesis while that of non-academic staff category was significant indicating $P=0.000 < 0.05$. The result of multinomial analysis showed that male respondents from different institutions were more likely to be involved in multiple drug use than their female counterpart with an odds ratio of 4.6 and 1.072 for students and non-academic staff respectively. The result of the analysis further indicated that all observed factors are significant with multiple drug usage with $P=0.000 < 0.05$ which falls on the rejection region of the hypothesis assuming 95% confidence level. More so, findings on comparison of drug usage among the respondents showed that multiple drug use among the students in both institutions is the same while that of the non-academic staff is significant with P -value of 0.949 for students and 0.040 and for non-academic staff. Based on the results of the study, recommendations were made to advise drug law enforcement agencies to wake up to their responsibility to control drug trafficking especially in university campuses, educative posters and awareness should be created on dangers of multiple drug use in the universities and finally strict laws and measures should be established to punish offenders.

Keywords: Multiple drug use, students, non-academic staff, State universities, Multinomial logistic regression and Kolmogorov-Smirnov test.

1.0 INTRODUCTION

Multiple drug use involves the consumption of more than one drug at once. Although multiple drug use often refers to abuse of multiple illicit drugs, it's also inclusive of prescription medications used in nonmedical circumstances. In some instances, those on prescription medication may unintentionally combine substances. They may have a few glasses of wine without realizing that their prescription medication should not be mixed with alcohol, or they may be on multiple prescriptions from different doctors, not realizing that these medications interact negatively with one another. As a result, individuals should always inform every doctor of every medication they are taking and confirm that medications don't

interact negatively with each other or alcohol prior to beginning a new prescription. Multiple drug use among University students is hardly a new trend. University students have always represented a large portion of the population abusing drugs and alcohol on a regular basis. Although alcohol abuse has maintained a steady presence on University campuses, the type and frequency of other substances has varied throughout the years. Other people intentionally engage in multiple drug use in an effort to experience greater effects from multiple substances. Oftentimes, users may have a preferred substance of abuse that they then combine with other substances at times to enhance the primary substance's effects. For example, those who regularly abuse opiate drugs, like heroin or prescription painkillers, may sometimes take them with benzodiazepines to experience even greater relaxation or sedative effects while the combination of certain substances can certainly enhance desired effects of the drugs. Multiple drug abuse also enhances the potential negative effects of each drug. According to the University of Michigan, mixing drugs can also bring unpredictable consequences; this means that those who engage in multiple drug use cannot predict the array and severity of negative consequences that could result. The health of young people is a key factor in the promotion and preservation of the health of the population as a whole because it determines the overall level of population health in the short term (Tsvetkova and Antonova, 2013). There seem to be an increasing prevalence of drug abuse amongst adolescence (university students inclusive) despite the efforts of concerned bodies to curb this menace. University students are the most susceptible to drug use amongst different youth groups in Nigeria because most of them live outside the watch of their parents or guardian. Hence, an investigation on multiple drug use amongst university students and non-academic staff is sought for.

2.0 Review of Related Literature

UNODC (2005) stated that multiple drug use is a worldwide problem. It affects all sectors of society in all countries. In particular it affects the freedom and development of youths who are the world's most valuable asset. He further stressed that the prevalence of health-risky behaviors associated with adolescent illicit drug use has attracted growing international recognition and multiple drug use remains a major health challenge all over the world.

Bourne (2005) pointed out that according to the World Drug Report, a total of 180 million people abuse drugs worldwide and the majority of these are youths. In addition, research indicated that alcohol, tobacco and marijuana are the most commonly abused substances by adolescents across the globe.

World Youth Report (2003) indicated that 61% of 10th grade pupils in 30 European countries reported having used alcohol. In 1993, 23.4% of USA 10th grade students had tried marijuana and by 1997, 42.3 % had tried marijuana. This represented an increase of nearly 90% in less than a decade. Following the Canadian Addiction Survey (2005), 62.3% of youth aged 15 to 17 years engaged in early use of alcohol and 29.2% in early use of marijuana. In the Caribbean, a school survey on drug use done in Trinidad and Tobago in 1993 showed that 91% of students had used alcohol, 46.7% had used tobacco, and 6.9% had used marijuana, while 1% had tried cocaine.

Lakhampal and Agnihotri (2007) in their study opined that Africa has become a major centre of consumption of drugs such as marijuana, cocaine, heroin and other synthetic narcotics. Alcohol is the most abused drug.

Haladu (2003) describes drug abuse as excessive and persistent self-administration of a drug without regard to medically or culturally acceptable patterns.

Odejide (2000) posited that a drug is said to be abused when its use is not pharmacologically necessary especially when it's used in face of legal prohibition or when socially acceptable beverage is used excessively. Multiple drug abuse may lead to organized crimes and disruption of normal academic programmes. It has led to increased secret cult activities in secondary schools and most Nigerian universities, which has been a source of threat to lives and properties (Aluede, 2000). He further stated that the impact of drug abuse among Nigerian youths has also been associated with the loss of our societal values and ideals.

Melis et al., (2005) emphasizes that drugs alter the normal biological and psychological functioning of the body, especially the central nervous system.

Oshikoya and Alli,(2006) stressed that majority of the Nigerian youths ignorantly depend on one form of drug or the other such as Tobacco, Indian hemp, cocaine, morphine, Heroine and alcohol for their various daily activities.

Oshikoya and Alli (2006) further in their studies on perception of drug abuse amongst Nigerian undergraduates also identified dependence and addiction as one of the major consequences of drug abuse, characterized by compulsive drug craving seeking behaviours even in the face of negative consequences.

Maithya (2009) revealed that the common reasons for drug use amongst most university students in Nigeria are mostly out of curiosity and acceptance by friends (peer pressure).

Kiiru (2004) showed that peer pressure was responsible for youths' consumption of drugs for the purpose of stimulating appetite for food.

Ndom and Adelokun (1996) argued that male children from an unstable family were associated with high risk of substance abuse, this argument is supported with clinical findings by Nkyi (2015) indicated that cannabis abusers are mostly young Nigerian men, including students, who have been deprived of parental supervision and warmth from infancy.

Awoyinfra (2012) argued that the very high rate of alcohol use and abuse among students in secondary and tertiary institutions in Nigeria began from their childhood or early adolescence. Pela (1989) pointed that at times youth, including students, who hawk for their parents, are themselves exposed to substance abuse. Some youths will experiment and stop, or continue to use occasionally without significant problems. Others will develop addiction, moving on to more dangerous drugs and causing significant harm to themselves and the society at large.

3.0 Materials and Methods

3.1 SOURCE OF DATA

The data used for the study was primary collected from structured questionnaires of 500 respondents of Imo State University (IMSU) and Chukwuemeka Odumegwu Ojukwu University (COOU) students and non-academic staff of both institutions. A total number of 500 questionnaires served to the respondent consisting of 400 sampled among the students of both institutions while 100 were sampled to the Non- academic Staff of both institutions.

3.2 Chi-Square X^2 test

Chi-Square test of independence/significance: The Chi-Square test of independence is used to determine if there is a significant relationship between two nominal (categorical) variables. The chi square test of independence was used to test for the significance of drug user. Also used to determine whether there is any significant association between the two categorical variables.

$$\chi^2 = \sum \sum \frac{(o_{ij} - e_{ij})^2}{e_{ij}}$$

3.3 Multinomial regression: Is used to predict the odds of being a case based on the values of the independent variables (predictors). This was used to compare the sex of the individual respondent in both institutions. $P(X_1^{(n)} = x_1, X_2^{(n)} = x_2, \dots, X_c^{(n)} = x_c)$

$$= \begin{cases} \frac{n!}{x_1! x_2! \dots x_c!} p_1^{x_1} p_2^{x_2} \dots p_c^{x_c}, & 0 < p_j < 1, \sum_{j=1}^c p_j = 1 \\ 0, & \text{otherwise} \end{cases} \quad \text{for } x_j^s \text{ nonnegative integers such that } \sum_{j=1}^c x_j = n$$

3.4 Kolmogorov-Smirnov test

Kolmogorov-Smirnov test is a non-parametric goodness-of fit test and is used to determine whether two distributions differ, or whether an underlying probability distribution differs from a hypothesized distribution. It is used when we have two samples coming from two populations that can be different.

H_o : The data follow a specified distribution

H_a : The data do not follow a specified distribution

Test Statistic: the Kolmogorov-Smirnov test statistic is defined as

$$D = \max_{1 \leq i \leq N} \left(F(Y_i) - \frac{i-1}{N}, \frac{i}{N} - F(Y_i) \right)$$

Where **F** is the theoretical cumulative distribution of the distribution being tested which must be a continuous distribution and it must be fully specified.

3.4.1 DATA PRESENTATION

Table 1:SEX and AGE cross-tabulation(students)

	17-20	21-24	25-28	29-33	33+	All
FEMALE	36	49	18	0		103
MALE	28	129	106	33		296
All	64	178	124	33		399
Non-Academic Staff						
FEMALE				6	24	30
MALE				6	63	69
All				12	87	99

Table 2: Frequency distributions of types of substance used among sample populations (Students)

	COOU	IMSU	All
A,C,T&W	10	9	19
A,C&T	40	44	84
A,M&C	2	6	8
A,M&N	1	0	1
A,T&W	1	0	1
A&C	24	28	52
A&M	16	24	40
A&T	7	8	15
A&W	32	16	48
ALCOHOL	45	46	91
MARIJUANA	13	7	20
TRAMADOL	4	5	9
WEEDS	5	7	12
All	200	200	400

Table 3: Frequency distribution of types of substance used by the respondents (Non-Academic Staff)

	COOU	IMSU	All
A,C&T	8	8	16
A&C	16	1	17
A&T	16	17	33
ALCOHOL	10	24	34
All	50	50	100

Table 4: Frequency distribution of types of substance & age of respondents (Students)

	17-20	21-24	25-28	29-33	All
A,C,T&W	9	0	10	0	19
A,C&T	6	56	0	22	84
A,M&C	8	0	0	0	8
A,M&N	0	0	1	0	1
A,T&W	0	0	1	0	1
A&C	0	30	11	11	52
A&M	0	11	29	0	40
A&T	11	3	1	0	15
A&W	0	26	22	0	48
ALCOHOL	30	32	29	0	91
MARIJUANA	0	8	12	0	20
TRAMADOL	0	9	0	0	9
WEEDS	0	3	9	0	12
All	64	178	125	33	400

Table 5: Frequency distribution of types of substance & age of respondents (Non-Academic Staff)

	29-33	33+	All
A,C&T	4	12	16
A&C	4	13	17
A&T	0	33	33
ALCOHOL	4	30	34
All	12	88	100

Table 6: Frequency distribution of types of substance & sex of respondents (Students)

	FEMALE	MALE	All
A,C,T&W	0	19	19
A,C&T	6	78	84
A,M&C	0	8	8
A,M&N	0	1	1
A,T&W	0	1	1
A&C	12	40	52
A&M	14	26	40
A&T	1	14	15
A&W	3	45	48
ALCOHOL	47	44	91
MARIJUANA	12	8	20
TRAMADOL	9	0	9
WEEDS	0	12	12
All	104	296	400

Table 7: Frequency distribution of types of substance & sex of respondents (Non-Academic Staff)

	FEMALE	MALE	All
A,C&T	5	11	16
A&C	7	10	17
A&T	9	24	33
ALCOHOL	9	25	34
All	30	70	100

Table 8: distribution of Reasons for the use of substance among the population

Reasons	Observed frequencies	
	Students	Non-Academic Staff
DEPRESSION	86	-
HEALTH	14	12
IMPRESS FRIEND	17	-
KEEP FIT	90	-

multi-reasons	9	1
NEGLECT/ABANDONMENT	36	16
STAY AWAKE	9	-
STRESS	139	55
FAMILY PROBLEM	-	16
Total		

4.0 Results of Analysis

Table 4.1: Chi square test of independence result DRUG USERS CATEGORY(Students)

	Observed N	Expected N	Residual
SINGLE USER	132	133.3	-1.3
DUAL/TWO USERS	135	133.3	1.7
MULTIPLE USERS	133	133.3	-.3
Total	400		

Table4.1.1:Test Statistics

DRUG USERS CATEGORY	
Chi-Square	.035 ^a
Df	2
Asymp. Sig.	.983

From the table 4.1 above, it can be observed that the difference between the categories of drug users with the student category is not statistically significant as $P=0.983 > 0.05$. This implies that whether an individual is using only one type of drug, or two or more, they all fall within the same category.

Table 4.2: Chi square test of independence result CATEGORY OF DRUG USERS(Non-Academic Staff)

	Observed N	Expected N	Residual
SINGLE USERS	34	33.3	.7
DUAL/TWO USERS	16	33.3	-17.3
MULTIPLE USERS	50	33.3	16.7
Total	100		

Table4.2.1:Test Statistics

DRUG USERS CATEGORY	
Chi-Square	.17.360 ^a
Df	2
Asymp. Sig.	0.000

From the table 4.2 above, it is observed that the difference between the categories of drug users with the non-academic staff category is significant as $P=0.000 < 0.05$. This implies that

there is a significant difference between a single, dual/two type of user and multiple types of users. Multinomial logistic regression result shows that male students from both institutions are 4.6 times more likely to engage in multiple use of substance than the female. The result also shows that age 25-28 years were 3.48 time more likely to be involved in multiple drug use more than other age categories in the study. When the two institutions used for the study was assessed, students from Chukwuemeka Odumegwu Ojukwu University (COOU) were found to have an odds ratio of 7.56, which implies that they are more likely to be involved in multiple use of substance than their counterpart. Students from polygamous background were also found to have an odds-ratio of 9.32, which also indicated that they are 9.32 times more likely to engage in multiple use of substance than students from monogamous background. Correlation of multiple substance use among non-academic staff shows an odds-ratio of 1.072 for male, which indicated that male non-academic staff members are 1.072 times more likely to use multiple substance compared to their female counterpart. Ages above 33years of age among non-academic staff shows an odds-ratio of 0.192 indicating more likely to indulge in multiple use of substance than other age category. The result further shows that keeping fit, stress, depression and to impress friends are the most significant factors responsible for the use of multiple drug among the students. It equally shows that there is a strong correlation between age and these factors while it was also observed that students who came from a polygamous background were significant.

Table 4.3 : Kolmogorov-Smirnov Test Result of significance among students

Test Statistics ^a		which drug have you ever use
Most Extreme Differences	Absolute	.052
	Positive	.052
	Negative	-.029
Kolmogorov-Smirnov Z		.521
Asymp. Sig. (2-tailed)		.949
a. Grouping Variable: INSTITUTION		

From the table 4.3 above, we concluded that multiple substance use among students is the same in the both institutions with P-value of $0.949 > 0.05$ which falls on acceptance region of the hypothesis.

Table 4.4: Kolmogorov-Smirnov Test result of significance among non-academic staff

Test Statistics ^a		which drug have you ever use
Most Extreme Differences	Absolute	.280
	Positive	.020
	Negative	-.280
Kolmogorov-Smirnov Z		1.400
Asymp. Sig. (2-tailed)		.040
a. Grouping Variable: INSTITUTION		

From the table 4.4 above, we also concluded that multiple substance use among non-academic staff is not the same in the both institutions having P –value 0.040 less than alpha of 0.05 which falls on the rejection region assuming 95% confidence level.

5.0 Discussion of findings

This study focused on the use of multiple drugs among students and non-academic staff of two State Nigerian Universities. The result of the analysis showed that the association between drug user in the student category was not significant as $P=0.983 > 0.05$ while that of the non-academic staff category was significant as $P=0.000 < 0.05$. The result of multinomial analysis showed that male respondents were more likely to be involved in multiple drug usage than their female counterpart with an odds ratio of 4.6, and 1.072 for students and non-academic staff respectively. This implied that male students from both institutions are 4.6 times more likely to engage in multiple use of substance than the female indicating that use of multiple substances is predominantly among male in both institutions under study. This result is in consonant with result from a study in Botswana by Gobopamang et al (2016) in which male adolescents from there were more likely than their female counterparts to have experienced multiple substance use of drugs and alcohol with odds ratio of 2.0 and (95% CI, 1.3-3.3); The result of analysis equally indicated that all observed factors are significant with multiple drug usage with $P=0.000 < 0.05$ which falls on the rejection region of the hypothesis. Further findings on comparison of drug usage among the respondents showed that multiple drug usage among the students in the institutions is not significant while that of the non-academic staff is significant with P-value of 0.949 and 0.040 for students and non-academic staff respectively.

6.0 Conclusion

Drug abuse is a problem that is of a great concern to the society and the government at large. The problem is prevalent among youths who in most cases are ignorant about the dangers inherent in drug abuse. Based on the results of the study, recommendations were made to advise drug law enforcement agencies to wake up to their responsibility to control drug trafficking especially in university campuses, educative posters and awareness should be created on dangers of multiple drug use in the universities and finally strict laws and measures should be established to punish offenders.

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