

# Knowledge of Health Effects and Substance Use among Students of Tertiary Institutions in Southwestern, Nigeria

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## Abstract

The upsurge in the use of substances as reported by various scholars appears to be global in nature. Although, everyone is at some risk of alcohol, marijuana, and tobacco related problems, students in tertiary institutions seem to be particularly vulnerable. This study focussed not only on the risk taking behaviour involved in tobacco, marijuana and alcohol consumption but also investigated the knowledge of health effects as related to the use of these substances. The study adopted the survey research design. The sample consisted of 2,297 respondents who were sampled using multipurpose sampling technique. A set of questionnaire developed and validated by the researchers was used to collect data for the study. The data collected were analysed using descriptive statistics and Pearson Product Moment Correlation Analysis. All the hypotheses were tested at 0.05 level of significance. The study revealed that a high percentage of respondents consumed alcohol while some of them had tried tobacco/cigarette and marijuana. Also, a significant relationship existed between knowledge of health effects (physical, Social and psychological health) and substance use. The study showed that the higher the knowledge of health effects with respect to physical, social and psychological health, the lower the substance use by the respondents. Based on the findings of this study, it was recommended that drug education should be integrated into the General Course Studies in tertiary institutions in Nigeria.

**Keywords:** substance use, health effects, health risk behaviour, peer influence

## 1. Introduction

Man has used and abused certain substances since time immemorial. In almost all cultures, there has been the desire for man, consciously or unconsciously to escape from monotony, frustration and pains and to seek euphoria or a sense of well-being when taking part in different achievement tasks. Substances such as alcohol, marijuana and tobacco are no exception. These substances are included among the psychoactive substances.

The prevalence of psychoactive substances according to Silva et al. (2006) is increasing among students of tertiary institutions and this has become a major public health and social concern. Law enforcement authorities, health providers and substance abuse researchers are in agreement that the nature and extent of illicit drug trafficking, use and associated problems have increased dramatically during the 1990s as the country has gone through a major political and social transformation (Parry, 1998). The global estimates showed that about 205 million people make use of one illicit substance or another with marijuana being the most commonly used (WHO, 2004).

Substance use in the world varies considerably from region to region and from one nation to the other. Estimates of UNDCP (1997) showed that marijuana is the most widely abused substance in all parts of the world with an estimate of 141 million people consuming it. The report further stated that a large number of young people experiment with marijuana with as high as 37 percent of school children and young adult consumers. The past decade has seen several new trends in substance use by college students (Stewart, 2001). In the same vein, Hales (2007) asserted that drug use on universities campuses in America is on the increase with almost half of the undergraduates attesting to the fact that they have used marijuana. Tracing the increase, the scholar discovered that substance use on campus started in 1990 with the steepest rise in mid 1993. The discovery also showed that drug use increased most dramatically among minority of students with the highest rate of drug use particularly among African-American and Asian-Pacific than white students.

Much of the substances use among youths takes place in schools (Okoza and Aluede, 2009). Hitherto, Hales (2007) observed that some undergraduate students drink more often and more dangerously than young people of their age who are not in college. The emergence and the increasing rate of substances use were first discovered in the developed world (Sue, Sue and Sue, 2006). However, developing countries seem to be witnessing increase in the occurrence of substances use especially among students of tertiary institutions. There is no doubt that the use of substances is prevalent in Nigeria (James & Omoregba, 2013). Also, the findings of Yusuf (2010) supported the assertion that substances use is common among undergraduate students in Nigeria, that many students consume substances such as alcohol and tobacco. An epidemiological survey conducted on students by Federal Ministry of Education in Nigeria (1995) found out that 11% of the students have smoked cigarette while 5% have used cannabis. In the same vein, Yusuf (2010) reported that 84 students from Osun State tertiary institutions were caught using illicit substances in 2009 by the National Drug Law Enforcement Agency

(NDLEA). Similarly, two undergraduates were arrested at Muritala Mohammed International Airport in Nigeria while attempting to import about 1.370kg and 1.6 kg of cocaine (Adio, 2011 & Osa Okunbor, 2011).

Majority of substances use among youth starts in the school as adolescents tend to follow a particular pattern of involvement with drugs (Igwe, et al. 2009). The first substances an adolescent uses may be one that is legal for adults such as tobacco or alcohol. The next stage is often experimentation with marijuana. Marijuana is the most widely used illicit substance globally (Shaul, Bernard, Kwame, Tony & George, 2013), while the most common substances used by undergraduates were alcohol and tobacco (Bello & Owoaje, 2010). Excessive use of potentially addictive substances such as alcohol and marijuana may have detrimental effects on individual's physical and mental health of the individual or the welfare of others.

The consumption of alcohol may precede the use of other illicit substances. Alcohol and cigarette were considered as gateway substances because they are the initial substances used before other ones such as marijuana and cocaine (Omigbodun & Babalola, 2004). The use of alcohol has been observed to be associated with adverse health and social consequences arising from its intoxicating abilities to its toxic and dependence-producing properties. Alcohol was discovered to contribute to traumatic outcomes that sometimes kill or disable the user at a relatively young age thereby resulting into loss of many years of life to death or disability (Chikere & Mayowa, 2011). The prevalence of smoking is on the increase in Nigeria (Ojikutu & Adeleke, 2010). Tobacco can be identified as a common substance used by students because it is attractive, cheap and easy to buy (Yusuf, 2010). The act of smoking by students could be enhanced by social environment such as belief about smoking, having parent, friend or relation who smokes or advertisements on tobacco and the belief that smoking is enjoyable (Riceep, 1978).

Of the illicit drugs, cannabis is most used by teenagers since it is perceived by many to be of little harm. This perception has led to a growing number of states approving its legalization and increased accessibility (Yasmin, Michael, Michael & Didier, 2013). A correlation was found between tobacco and marijuana use (Yusuf, 2010). The herbal form of marijuana is the most abused substance in West Africa because marijuana is locally cultivated all over the region and it is therefore affordable (UNODC, 2011). Also, farms where marijuana is cultivated is scattered all over Nigeria (Abudu, 2008). The use of marijuana could result into diverse health problems such as depression and diminished immune responses. The effect on the brain such as the ability of the substance to impair thinking, reading, comprehension and skills could interfere with learning. On the other hand, the use of marijuana could affect a wide range of driving skills needed for safe driving. Slowing down of thinking and other reflexes properties of marijuana may make it difficult for drivers under its influence to respond to sudden or unexpected events, stay on lanes or maintain speed and proper distance between vehicles when driving.

It is not out of place to reason that having knowledge of the health effects of substance use is essential for behaviour change. It is assumed that having adequate knowledge of the risks associated with substances use will reduce the rate at which student consume them. Lack of knowledge leaves people exposed to substances use while an awareness of the relevant facts allows them to choose healthy lifestyles through the ability to resist social pressure to use drugs (Roe & Becker, 2005). However, students behaviour towards substances use as observed by Olaitan (2006) revealed the likelihood of poor or low awareness of the health effects. The author stated further that most adolescents lacked knowledge of the effects of substances they engaged in. The studies of Eneh & Stanley, (2004) and Oshikoya & Alli (2006) attributed the poor knowledge of the adverse health effects of substances abuse to inadequate drug education and lack of appropriate information about substances use.

Moreover, various scholars have posited on the relationship between the level of awareness of substances use and the rate of consumption among students. For example, Shafiq, et. al, (2006) discovered that the greater the knowledge of harmful effects of drugs the lesser the consumption. On the contrary, Raute, et. al, (2011) reported that despite a fairly high level of awareness of health effects from smokeless tobacco use in Maharashtra and Bihar, the majority of smokeless tobacco users had no intention to quit.

A capsule review of literature showed a divergent view as to whether the knowledge regarding the consequences of substance use among adolescents and young adults is enough to prevent them from initiating and continuing its use. This is a question that needs to be answered and determined empirically. It is against this background that the present study is designed to find out if relationship exists between the knowledge of health effects and substance use amongst the students in tertiary institutions in Southwestern Nigeria.

## **1.2. Purpose**

The aim of this study was to identify the type of substances used by students and to determine if relationship exists between knowledge of health effects and substance use.

## **2.0 Research Questions**

The following research questions guided the study:

- 2.1 What are the types of substances used by students in tertiary institutions?
- 2.2 To what extent are the students of tertiary institutions aware of the health effects of substances used?

### 3.0 Research Hypotheses

The following null hypotheses were tested at 0.05 significant level:

- 3.1 There is no significant relationship between the Knowledge of health effects and substance use among students in tertiary Institutions.
- 3.2 There is no significant relationship between the Knowledge of physical health effects and substance use among students in tertiary Institutions.
- 3.3 There is no significant relationship between the Knowledge of social health effects and substance use among students in tertiary Institutions
- 3.4 There is no significant relationship between the Knowledge of psychological health effects and substance use among students in tertiary Institutions
- 3.5 Gender will not significantly influence the knowledge of health effects of substance use among students in tertiary institutions

### 4. Methodology

The study adopted descriptive research design of the survey type. The research design was considered appropriate because it described the existing situation regarding the substances use and the knowledge of health effect among the respondents. The study population include all male and female students undergoing regular study in the Universities, Polytechnics and Colleges of Education in the six states in Southwestern Nigeria. A total of 2,297 respondents were selected using random, stratified and proportional random sampling techniques. The sample for the study was drawn from three states out of the six states in Southwestern, Nigeria using simple random sampling. The next step involved the use of stratified sampling in classifying the institutions in the three states into three categories viz, College of Education, Polytechnic and University. Thus, three institutions each were selected from the universities, polytechnics and colleges of education respectively. The researchers utilized a set of questionnaire for data collection. The questionnaire was in three sections. The first section sought information on demographic characteristics of the respondents such as gender, type and ownership of institution. The second section contains question which require information on types of substances respondents used. The items were designed using a three-point scale (ranging from 1= Never Used to 3=Currently Used). The third section contains question on the knowledge of health effects of substances used. Twenty-one items were specifically designed to probe the respondents awareness of the health effects of substances used. The instrument was validated using Lawshe Content Validity. The reliability of the questionnaire was determined using test retest with a reliability coefficient of 0.89. The administration of the questionnaire was done by the researchers and assisted by three research assistants after obtaining permission from the institutions' authority, lecturers and the respondents. The questionnaire was administered to the respondents in the lecture rooms at different levels of the faculties in the universities and schools in the Polytechnics and Colleges of Education that were involved in the study. The respondents were given sufficient time to answer the questions in the instrument. The data collected were analysed using descriptive statistics of frequency counts and percentages while Pearson Product Moment Correlation Analysis was used to test the five research hypotheses formulated for the study. All the hypotheses were tested at 0.05 level of significance.

### 5.1 Results

5.1.1. Research Question 1: what are the types of substance used by students in Southwestern, Nigeria

**Table 1: Frequency and Percentage of substances used by the respondents**

Substance	Currently Used	Used but Discontinued	Never Used
<b>Alcohol</b>			
Beer/Guinness	1424 (62%)	140 (6.1%)	733(31%)
Hot drinks (Dry Gin, Whisky )	934 (40.7%)	182 (7.9%)	1181 (51.4%)
Palm wine	1440 (62.6%)	201 (8.8%)	656 (28.6%)
Locally brewed Gin	664 (28.9%)	168 (7.3%)	1465 (63.8%)
Energy Drink	1129 (49.2%)	228 (9.9%)	940 (40.9%)
<b>Marijuana</b>			
Marijuana	339(14.8%)	123(5.4%)	1835(79.9%)
<b>Tobacco</b>			
Cigarette	617(26.9%)	217(9.4%)	1463(63.7%)

The data in table 1 showed that the three major substances (Alcohol, tobacco and marijuana) identified in this study had been tried by the respondents. A cursory look at the table showed that alcohol was consumed most by

the respondents while a small number of respondents had actually used tobacco (26.9%) and marijuana (14.8%) respectively. However, a few of the respondents indicated to have quitted the use of tobacco (9.4%) and marijuana (5.4%).

### 5.1.2 Research Question 2.

To what extent are the students of tertiary institutions aware of the health effects of substances used?

Table 2: Frequency counts and percentages of the knowledge of health effects of substances used.

Source	Yes		No	
	No	%	No	%
<b>Physical Health effects</b>				
Headache	2094	91.2	203	8.8
Hand tremors	1602	69.7	695	30.3
Liver damage	2142	93.3	155	6.7
Weight loss	1914	83.3	383	16.7
Accident	2024	88.1	273	11.9
Disease of the lungs	2124	93.3	153	6.7
High blood pressure	1913	83.3	384	16.7
Premature death	1982	86.3	315	13.7
<b>Psychological health effects</b>				
Emotional problem	1788	77.8	509	22.2
Increased aggressiveness	1844	80.3	453	19.7
Inability to sleep	1779	77.4	518	22.6
Restlessness/Nervousness	1916	83.4	381	16.6
Mental illness	1871	81.5	426	18.5
Poor concentration	1904	82.9	393	17.1
<b>Social Health effects</b>				
Alter family relationship	1736	75.6	561	24.4
Poor academic performance	1946	84.7	351	15.3
Unprotected premarital sex	1871	81.5	426	18.5
Make one violent	1841	80.1	456	19.9
Lead one into robbery	1764	76.8	533	23.2
Lead one into cultism	1869	81.4	428	18.6
Affect ones finance	2063	89.3	234	10.2

Table 2 reflects the commonest health effects of substances used as perceived by respondents. A high percentage of the respondents reported having knowledge about the physical, psychological and social health effects of substances used. The leading health effects of substance use as indicated by the respondents include liver damage (93.3%); disease of the lungs (93.3%) and headache (91.2%) for physical health effects. Similarly, more than 75% of the respondents recognised the psychological and social health consequences of substances used.

**5.1.3. Hypothesis 1:** There is no significant relationship between the Knowledge of health effects and substance use among students in tertiary Institutions

Table 3: Pearson Product Moment Correlation analysis on knowledge of health effects and substance use

Variable	N	X	SD	Df	r-cal	r-tab	Result
Knowledge of Health effects	2297	17.42	4.51				
Substance Use	2297	32.19	12.0	2295	-.104*	.062	S

\*P<0.05

Table 3 showed that calculated r (-.104) was greater than r table (0.062). Since p<0.05, the null hypothesis was rejected. This denotes that there is a significant negative relationship between the knowledge of health effects and substance use among the respondents. This implies that the higher the knowledge of health effects, the lower the rate of substance use.

**5.1.4. Hypothesis 2:** There is no significant relationship between the Knowledge of physical health effects and substance use among students of tertiary Institutions

Table 4: Pearson Product Moment Correlation analysis on knowledge of Physical health effects and substance use

Variable	N	X	SD	Df	r-cal	r-tab	Result
Knowledge of Physical Health effects	2297	6.89	1.62				
Substance Use	2297	32.19	12.0	2295	-.065*	.062	S

\*P<0.05

Table 4 showed a negative relationship between the knowledge of physical health effects and substance use among the respondents. Since the r-calculated -0.065 was greater than r table value of 0.062 at p<0.05, the null

hypothesis was rejected. This indicated that that there was a significant negative relationship between the knowledge of physical health effects and substance use among students of tertiary institutions. This means that the higher the knowledge of the physical health effects, the lower the rate of substance use.

**5.1.5. Hypothesis 3:** There is no significant relationship between the Knowledge of social health effects and substance use among students of tertiary Institutions

**Table 5:** Pearson Product Moment Correlation analysis on knowledge of Physical health effects and substance use

Variable	N	X	SD	Df	r-cal	r-tab	Result
Knowledge of Social Health effects	2297	5.70	1.97				
Substance Use	2297	32.19	12.0	2295	-.100*	.062	S

\*P<0.05

Table 5 showed that calculated r (-.100) was greater than r table (0.062). Since the r-calculated value was greater than the table value at p<0.05, the null hypothesis was therefore rejected. This implies that there was a significant negative relationship between the knowledge of social health effects and substance use among the respondents. Thus, the knowledge of social health effect increases as the use of substances decreases.

**5.1.6 Hypothesis 4:** There is no significant relationship between the Knowledge of psychological health effects and substance use among students of tertiary Institutions

**Table 6:** Pearson Product Moment Correlation analysis on knowledge of Psychological health effects and substance use

Variable	N	X	SD	df	r-cal	r-tab	Result
Knowledge of Psychological Health effects	2297	4.83	1.71				
Substance Use	2297	32.19	12.0	2295	-.096*	.062	S

\*P<0.05

The result in Table 6 showed that calculated r (-0.096) was greater than the table value of 0.062. The fact that the calculated value was greater than the table value at p<0.05, the null hypothesis was rejected. This means that there was a significant negative relationship between the knowledge of psychological health effects and substance use among the respondents. It implies that the higher the knowledge of psychological health effects, the lower the rate of substance use.

**5.1.7 Hypothesis 5:** Gender will not significantly influence the knowledge of health effects of substance use among students of tertiary institutions

**Table 7:** t-test comparison of gender on knowledge of health effects among students of tertiary institutions

Variable	N	X	SD	df	t-cal	t-tab	Result
MALE	1512	17.33	4.55				
FEMALE	755	17.59	4.41	2295	1.32	1.96	NS

In table 7, t-cal (1.32) was less than t-tab (1.96) at p>0.05 level of significance. This denotes that the null hypothesis was not statistically significant. Hence, the null hypothesis was not rejected. Thus, being male or female will have no influence on the knowledge of health effects of substance use among respondents.

## 6. Discussion

The result of the present study showed that that respondents claimed to have used alcohol, tobacco/cigarette and marijuana. Majority of the respondents were users of alcoholic beverages. The percentage of alcoholic drinkers was higher than that of cigarette smokers (26.9%) and marijuana users (14.8%). However, a small number of substances users reported to have discontinued the habits. This finding is supported by Emiola (1990) who found out that the three common drugs among university students were marijuana, alcohol and tobacco/cigarette. Similarly, the finding was consistent with the studies of Igwe, et al (2009) and Al-Haqwi (2010) that discovered that alcohol was the most commonly used substance in college campuses. The similarity in the findings of a higher prevalence of alcoholic consumption among students might be due to the fact that alcoholic substances of various types are socially tolerated, accessible, affordable and easily available. However, this finding contradicted the study of Yusuf (2010) who found out that Amphetamine was mostly used substances by students of tertiary institutions

The result of this study notwithstanding the harmful effects of substance abuse cannot be over emphasized. The abuser might justify the practise by positing that it helps in lifting mood, induces confidence and suppresses worries and anxiety. But these feelings are ephemeral and could lead to lethal consequences in the sense that heart functioning and breathing can be severely depressed thereby causing death (Kobiowu, 2006).

Another key finding in this study is that the knowledge regarding the knowledge of health effects of alcohol, tobacco and marijuana use is considerably high among the respondents. Of the listed health effects, majority of

the respondents knew that substance abuse can affect the physical, psychological and social health of the users. This finding was in accord with the report of Malara et. al (2006); Odejide, (2009) and Dechenla, Ranabir & Aparjita (2010). These researchers asserted that their respondents were highly aware of the health effects of substances use. The high level of awareness demonstrated by respondents may be attributed to regular advertisements on some substances in the media that continuous use of such substances is injurious to their health. A good example is smokers are liable to die young that usually end the advertisement of cigarette smoking in Nigeria. On the contrary, the findings of this study disagreed with Oshikoya and Alli, (2006); Olaitan (2006); Oshodi et.al (2010) and Nwankwo et al (2013). These researchers discovered that the knowledge of health effects of substance use was insufficient and that their respondents demonstrated poor knowledge of the risks associated with psychoactive substances use. The finding of the study revealed that a significant relationship exists between knowledge of health effects and substances use. This finding agreed with Shafiq et al (2006)'s discovery that the greater the knowledge of harmful effects of substance, the less the consumption of such substance. The negative significant relationship between knowledge of health effects and substances use was in line with Ndom & Adelekan (1996) but Eneh & Stanley (2004) and Raute et al. (2011) found out that the awareness of the detrimental effects of substance on the health of the user did not prevent students from using substances. The findings that being male or female will not significantly influence the knowledge of health effects of substances use was consistent with the findings of researchers such as Ljubotina, Galicand & Jukic (2004) and Motyka et al. (2007). This could be attributed to the absence of formal setting where students are taught about adverse effects of substance use. Most times, students know about drugs and the health effects from friends or through incidental learning.

## 7. Conclusion and Recommendations

Based on the findings of this study, majority of the respondents consumed alcohol while a small number of the respondents had tried tobacco and marijuana. Knowledge of the health effects of substance use is high. However, the adequate knowledge regarding the health effects of substance use did not prevent them from quitting its use. The findings of this study indicate that the knowledge of health effects of the identified substances has an inverse relationship with consumption. This implies that if the knowledge of the health effects is high, the consumption will be low. Also, if the knowledge is low, the rate of consumption will be high. Therefore, health educators should develop programmes that would educate student population in tertiary institutions on the negative effects of substances use. Also, drug education should be integrated into the General Course Studies in tertiary institutions in Nigeria. Health educators should develop education programmes such as workshops or enlightenment programmes in the campuses using billboards or posters.

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