



The Prevalence of Substance use among in-School and out-of-School Adolescents: A Comparative Analysis in Anambra State, Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. Authors CRA, FNI and POA conceptualized and designed the study. Authors CRA, FNI and PON did literature search. Authors ECA, PON and MCO performed the statistical analysis and wrote the protocol. Authors CRA, MCO and ECA wrote the first draft of the manuscript. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JAMMR/2021/v33i1731037

Editor(s):

(1) Dr. Sevgul Donmez, Mugla Sitki Kocman University, Turkey.

Reviewers:

(1) Jesús G. Rodríguez Diego, Universidad Autonoma Metropolitana, (UAM), Mexico.

(2) Jeongwoon Yang, Kyungbok University, South Korea.

Complete Peer review History: <https://www.sdiarticle4.com/review-history/68842>

Original Research Article

Received 10 April 2021

Accepted 16 June 2021

Published 03 August 2021

ABSTRACT

Aim: The use of various substances is very common among the populace. These agents are readily abused by adolescents and youths who are introduced to these substances at an early age in life. This thus leads to abuse and misuse that eventually has a catastrophic outcome to the society at large.

The aim of this study was to determine the prevalence of substance use among in-school and out-of-school adolescents; a comparative analysis in Anambra State, Nigeria.

Study Design: This was a cross-sectional comparative study.

Place and Duration of Study: The study was conducted in schools, parks and markets of Onitsha municipal area of Anambra State, Nigeria, from September 2019-April 2020.

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Methodology: A total of 250 in-school and 250 out-of-school adolescents aged 10-19 years, within Onitsha municipal area was sampled through the use of a semi-structured interviewer administered questionnaire, that was adapted from a WHO designed instrument on drug use among non-student youths. Frequency distributions were developed, while associations between variables were tested using t-test, fisher's test, and chi-square.

Results: The results showed that most participants were males with mean ages of both sexes being 16.7 among the in-school and 16.1 in the out-of-school. There was statistically significant difference in alcohol consumption between in-school compared to out-of-school, $p=0.001$; and cigarette smoking, $p=0.001$. However, inhalants use was more among in-school compared to out-of-school, though not statistically significant. The overall prevalence of substance use was 58.4%, with 80.4% among the out-of-school compared to 36.4% with the in-school participants.

Conclusion: Substance use is common among in-school and out-of-school adolescents. The prevalence of substance use was significantly higher among out-of-school compared to in-school adolescents. Parents should teach their children the dangers of substance abuse while Schools and governments should ensure inclusion of such in the curriculum.

Keywords: Prevalence; substance use; in-school; out-of-school; adolescents.

1. INTRODUCTION

Substance abuse is a global public health problem especially among adolescents and youths and this has become endemic in the population. This is thus a clarion call for concern in Nigeria, among religious bodies, non-governmental organizations, communities, families, the society, and other stakeholders to act and curb the menace[1]. These adolescents who are oftentimes students that engage in substance use and abuse get involved in nefarious activities such as robbery, rape, cultism and others devoid of adult control because they seek independence of their lives. In the quest for independence, these students depend on various drugs ranging from tobacco, Indian hemp, Alcohol, Codeine, Morphine, caffeine, glue and others at very frequent use and early age to cause harm to themselves and the society[1-3]. In spite of the dangerous risk associated with substance use among adolescents, they continue to use them in consequence to physical and mental complications. Today, ingenuity has been introduced into drug abuse with complex mixtures, experimentations and new discoveries. This has resorted to the abuse of lizard dung (especially the whitish part), pit toilet/soak away fumes (bio generic gas), "goskolo" a concoction of unimaginable substances, robin blue powder cocktail, "gadagi" (a substance resembling tea leaves), pharmaceutical products (Tramadol, Rohypnol) and many more. This trend was from the war times era to the 1980's and presently with the technologies that enhance mass production of these drugs, the rate of abuse is now alarming[3-4]. Globally, cannabis is the most commonly used (129-190 million people),

followed by amphetamine type stimulants, then cocaine and opioids [5]. Cannabis is globally the most commonly used psychoactive substance under international control. In 2013, an estimated 181.8 million people aged 15-64 years used cannabis for nonmedical purposes globally (UNODC, 2015). Smoking is dangerous to the health of both young and older people who have been smoking longer and the chemicals from smoke damages the human body regardless of age [5,6].

Alcohol is another commonly abused substance among the populace, however, a cross-sectional home survey conducted in Rwanda showed that in the prior month, past 12 months and lifetime prevalence use of alcohol, tobacco, cannabis, diazepam, glues, solvent, as well as local brews with mixtures of sorghum, sugar and cannabis were all increased[7]. This study further buttressed that some students were associated with a low prevalence rate of 32.63% compared to Dropped Out of School and Never Went To School with a relatively high prevalence rate of substance abuse of 59.12% and 66.96% respectively[7]. Another WHO survey in two countries in Africa showed that, among the population aged 15 years and above more males than females reported heavy episodic drinking in Nigeria [6] while in Uganda, similar higher male prevalence was also noted for heavy episodic drinking[8].

In Nigeria, the North-West rank the highest in drug abuse addiction. The North-West has a statistics of 37.47 percent of the drug victims in the country, while the South-West has been rated second with 17.32 percent, the South-East

is been rated third with 13.5 percent, North-Central has 11.71 percent, while the North-East zone has 8.54 percent of the drug users in the country[9]. In Nigeria also, Rapid Situation Assessment study conducted by National Drug Law Enforcement Agency in collaboration with United Nations International Drug Control Programme (UNDCP) confirmed that cannabis was the most widely abused and trafficked drug in Nigeria. Furthermore, there was high abuse of cocaine in North (Kano) and Southern States (Lagos, Rivers, Delta, Cross River, Ogun) as well as high use of solvents among marginalized youth and street children in some Northern States[10].

According to Centre for Disease Control (CDC), nearly all tobacco use begins during youth and progresses during young adulthood. More than 3,200 children aged 18 or younger smoke their first cigarette everyday[11]. Nearly 9 out of 10 smokers start before the age of 18 and almost all start smoking by age 26. Every adult who dies early because of smoking is replaced by two new younger smokers and if smoking continues at this rates, 5.6 million or 1 out of every 13 of today's children will ultimately die prematurely from a smoking related illness[11]. Another study on drug use among adolescents conducted by Abdulkarim et al involving 1200 students, aged 10-19years in Ilorin showed a prevalence of rate 40.1%[12]. It further showed the different rate of abuse of some mild stimulants such as kolanut and coffee, alcohol, sniffing agents, amphetamine and ephedrine, cigarette, heroin, cocaine and cannabis were varied and high too. Multiple drug use was found among the students, with the abuse of cannabis, cocaine and heroin being significant among those who smoked cigarette[12]. A study conducted by Imaobong involving 260 secondary students in Uyo Local Government Area of Akwa Ibom State showed that the prevalence of substance use among adolescents - Two hundred and eighteen (83.8%) adolescents in the study area used substances while 42 (16.2%) did not ; 58.7% of the substance users were males while 41.3% were females[13]. The consequences of substance use and abuse by students may include extreme violence, gang rape, drug induced suicide, sleep disorders, paranoia, aggression, irritability, poor academic performance, larceny (to feed the habit), school dropout, poor health condition (cardiovascular diseases, HIV infections, sexually transmitted diseases, cancers, infertility, tuberculosis, injuries), road traffic accidents, among others. It

is associated with anti social vices among students such as cultism, thuggery, racketeering, and armed robbery. This means that the problem of drug abuse among students is the problem of everyone – the parents, the school, other students and the society at large [4]. However, aside the health consequences, harmful use of alcohol and illicit drugs brings significant social and economic losses to individuals and country at large [14]. The aim of this study therefore was to determine the prevalence of substance use among in-school and out-of-school adolescents; a comparative analysis in Anambra State, Nigeria with a view to making appropriate recommendation for policy direction.

2. METHODOLOGY

2.1 Study Area

The study was conducted in schools, parks and markets in Onitsha municipal area in Anambra State of Nigeria. Anambra State is located in the South-East Geopolitical Zone of Nigeria, at coordinates 6°20'N 700'E and 6°20'N 700'E[15]. Onitsha has two local government areas-Onitsha South and Onitsha North LGA. These LGAs are urban with a population of 125,918 and landmass of 42 sq km and 137,191 and 36.12 sq km respectively according to the 2006 National census report. The 2016 projected population of the LGAs are 166,600 and 181,500 respectively. Onitsha has 22 public secondary schools and 41 private secondary school with youth literacy rate for both sexes in English and any language of 96% and 97.7% respectively [15-17].

2.2 Study Design

This was a cross-sectional comparative study. It involved in-school and out-of-school adolescents aged 10-19 years, within Onitsha municipal area.

2.3 Study Population

Adolescents aged 10 to 19 years (WHO Classification) in secondary schools and out-of-school respondents were included in this study. However, Adolescents who met this inclusion criterion but were not willing to respond to questions were excluded.

2.4 Study Instrument

A pretested, semi-structured, interviewer administered questionnaire was used. This was adapted from a WHO designed instrument on drug use among non-student youths.

2.5 Sample Size Determination

The minimum sample size to determine a difference in substance use among in-school and out-of-school adolescents that is significant at the 5% level and with a 90% chance of detecting the difference (power) was calculated using the formula for comparison of two proportions [18]. After calculating and multiplying by a factor of 2, the minimum sample size of 394 was increased to 500 respondents to increase the power of the study, and for better generalization to the larger populace.

2.6 Method of Data Collection

After community entry, multistage sampling technique was used to select 250 respondents from in-schools and 250 respondents from out-of-school giving a total of 500 respondents. The semi-structured, interviewer administered questionnaire was given to the respondents by the authors.

2.7 Data Management

The data were cleaned by checking for any data collection or coding errors. Data entry and analysis was carried out with the aid of International Business Machines-Statistical package for the Social Sciences (IBM-SPSS) Version 21.0. Frequency distributions of the variables were developed. Means and proportions were calculated, while associations between variables were tested using appropriate tests of statistical significance- t-test, Fisher's test, and chi-square.

3. RESULTS

Table 1 above shows that most of the participants were males (67.4%) compared to the females (32.6%). The mean age for the out-of-school participants was significantly higher than that of the in-school participants (16.7 against 16.1).

Most of the in-school adolescents were involved only in household duties while their out-of-school counterparts were either hawking, involved in unskilled labours or as apprentice. Greater number of the participants (66.1%) lived with their parents up to age 15.

Table 2 above shows that there was statistically significant difference in the alcohol consumption

between the in-school and out-of-school adolescents within the past one month, $p=0.001$. Higher numbers of the in-school 173 (69.2) did not take alcohol compared to the out-of-school 50 (20.0). On the other hand, higher number of the out-of-school took alcohol nearly every day or nearly every week compared to the in-school participants. The table further showed that the life-time prevalence of cannabis use was 21.6%, with 7.6% among the in-school adolescents and 35.6% among the out-of-school participants. Among the out-of-school participants who have ever tried cannabis, the 12-months prevalence of cannabis use was 91.1% compared to 58.8% among the in-school participants while the mean age at start of cannabis use was 13.7 years with standard deviation 1.5 years, lower among the out-of-school compared to the in-school.

It was also shown that the overall life-time prevalence of cigarette smoking among the participants was 31.2%. There was significantly higher prevalence of smoking among the out-of-school participants compared to the in-school (52.8% versus 9.6%, p -value < 0.001). However, the mean age at start of smoking was significantly lower in the out-of-school compared to in-school (p -value = 0.034).

The Fig. 1 shows that the prevalence of participants with current alcohol intake (within the past 30 days) was 52.8% (264 out of 500 participants).

Table 3 above shows that the prevalence of abusing inhalants and other volatile solvents (life-time) was higher among the in-school participants (2.8%) compared to the out-of-school (0.8%), though not statistically significant (p -value = 0.176). The mean age at first start of intake of inhalants was almost same. Furthermore, Amphetamine abuse was seen only among the in-school participants, with life-time prevalence of 2.8%. The mean age at first intake of amphetamine was 11.8 years. The table also shows that life-time prevalence of barbiturates intake was higher among the in-school participants compared to the out-of-school (2.8% versus 1.2%) but not statistically significant. Also among those that ever took barbiturates/sedatives, higher number from the in-school group (75%) still take it nearly every week compared to the 33.3% from the out-of-school participants.

Table 4 above shows that the life-time prevalence of opiates intake was higher among

the out-of-school compared to in-school respondents (24.0% against 7.6%) and this was statistically significant; $p < 0.001$. Among those who ever took opiates, higher proportion of the out-of-school (19.4%) was still taking it nearly every day compared to 5.3% from the in-school group. There was no significant difference in the age at start of opiates intake between the out-of-school and in-school participants $p=0.184$. Furthermore, higher prevalence of tranquilizers intake (life-time) was among the out-of-school compared to the in-school participants, though not statistically significant (p -value = 0.623).

The above 5 table shows that the overall prevalence of substance use was 58.4%, with 80.4% among the out-of-school compared to

36.4% with the in-school participants, while the overall prevalence of substance use without alcohol was 37.8%. It also showed that this substance use without alcohol among out-of-school was also higher compared to the in-school (56.8% versus 18.8%) and this was significant, $p=0.001$.

Fig. 2 reveals that the highest percentage of in-school participants came from Army Day Secondary school (25%), followed by Metropolitan School (23%), while the least (9%) came from Our Lady's High School.

Fig. 3 shows that highest percentage of out-of-school participants came from Abuja Park and Ochanja market, while the least came from Onitsha South Park.

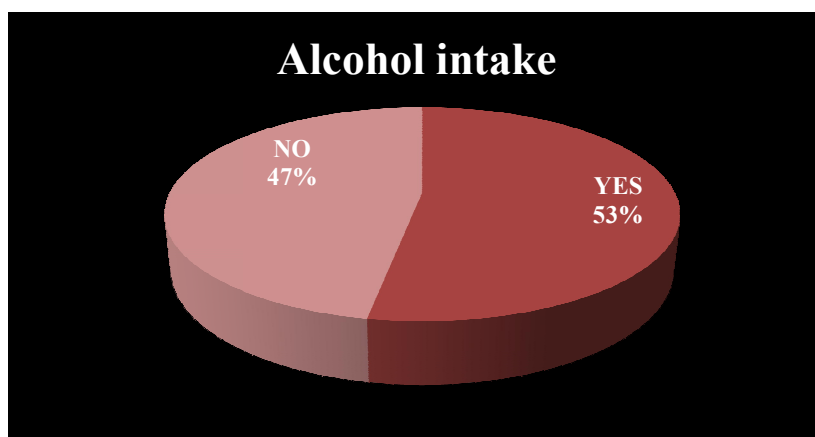


Fig. 1. Prevalence of current alcohol intake use among in-school and out-of-school adolescents; in Anambra State, Nigeria

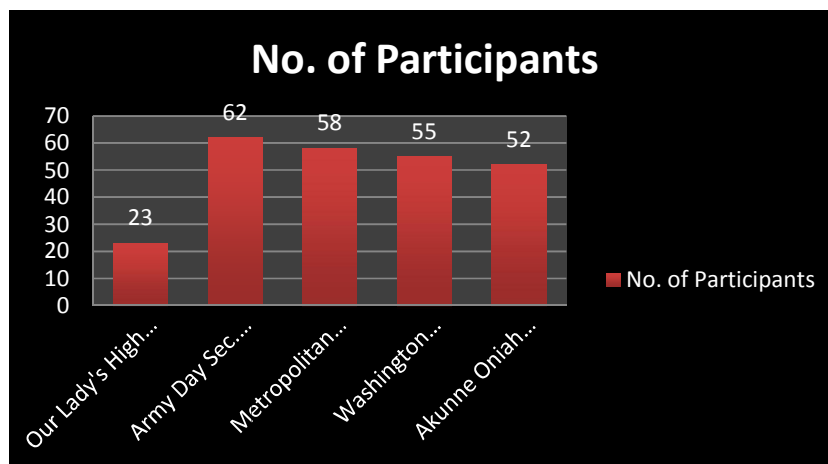


Fig. 2. School name of the In-school participants

Table 1. Distribution of the socio-demographic characteristics of the participants

Variables		In-School (%)	Out-of-School (%)	Total (%)
Age (years)	Mean \pm SD	16.14 \pm 1.19	16.68 \pm 1.71	p-value 0.001
Gender	Male	138 (55.2)	199 (79.6)	337 (67.4)
	Female	112 (44.8)	51 (20.4)	163 (32.6)
Type of work done by the participants	Household duties	204 (82.9)	6 (2.4)	210 (42.3)
	Hawking	8 (3.2)	115 (46.0)	121 (24.4)
	Unskilled labour	7 (2.8)	71 (28.4)	78 (15.7)
	Apprentice	0 (0.0)	43 (17.2)	43(8.7)
	Nothing at present	22 (8.9)	6 (2.4)	28 (5.6)
	Artisan	1 (0.4)	4 (1.6)	5 (1.0)
	Other skilled labour	2 (0.8)	1 (0.4)	3 (0.6)
	Farming	2 (0.8)	0 (0.0)	2 (0.4)
	Mechanical work	0 (0.0)	2 (0.8)	2 (0.4)
	Office/Shop clerk	0 (0.0)	2 (0.8)	2 (0.4)
Person lived with by the participants up to age 15	Mother & Father	196 (78.7)	134 (53.6)	330 (66.1)
	Mother only	31 (12.4)	28 (11.2)	59 (11.8)
	Father only	1 (0.4)	12 (4.8)	13 (2.6)
	Grand parents	10 (4.0)	28 (11.2)	38 (7.6)
	Other Relatives	9 (3.6)	42 (16.8)	51 (10.2)
	Foster homes	1 (0.4)	2 (0.8)	3 (0.6)
	Orphanage	0 (0.0)	2 (0.8)	2 (0.4)
	Others eg Pastor	1 (0.4)	2 (0.8)	3 (0.6)

Table 2. Prevalence of substance use between in-school and out-of-school respondents

Variables	In-school N=250(%)	Out-of-school N=250(%)	Total (%)	Fishers test	p-value
Alcohol					
Did not drink alcohol	173 (69.2)	50 (20.0)	223 (44.6)		0.001
Once or twice during the month	48 (19.2)	46 (18.4)	94 (18.8)		
Nearly every week during the month (3-4 times)	14 (5.6)	104 (41.6)	118 (23.6)	205.795	
Nearly every day of the month	3 (1.2)	49 (19.6)	52 (10.4)		
Don't know	12 (4.8)	1 (0.4)	13 (2.6)		
Cannabis					
Ever took cannabis	19 (7.6)	89 (35.6)	108 (21.6)	58.547	0.001
Cannabis use in the past 12 months	10 (58.8)	82 (91.1)	92 (86.0)	14.648	0.001
Cannabis use in the past month					
None	5 (26.3)	6 (6.7)	11 (10.1)	10.650**	0.009
1 or 2 times	3 (15.8)	6 (6.7)	9 (8.3)		
Nearly every week	7 (36.8)	30 (33.3)	37 (33.9)		
Nearly every day	4 (21.1)	48 (53.3)	52 (47.7)		
Age at 1 st Cannabis use in years (Mean±SD)	14.1 ± 1.6	13.6 ± 1.4	13.7 ± 1.5	1.444††	0.152
Cigarette use among participants					
Ever smoked cigarette	24 (9.6)	132 (52.8)	156 (31.2)	108.676	0.001
Cigarette smoking in the past 12 months	18 (75.0)	119 (89.5)	137 (87.3)	3.832	0.088
None	7 (29.2)	16 (12.0)	23 (14.6)	10.457**	0.011
1 or 2 times	4 (16.7)	23 (17.3)	27 (17.2)		
Nearly every week	9 (37.5)	31 (23.3)	40 (25.5)		
Nearly everyday	4 (16.7)	63 (47.4)	67 (42.7)		
Age at 1 st Cigarette use in years (Mean±SD)	13.8 ± 1.7	13.0 ± 1.7	13.1 ± 1.7	2.134††	0.034

** Fisher's exact test †† T-test

Table 3. Prevalence of substance use continued

Variables	In-school N=250(%)	Out-of-school N=250(%)	Total (%)	Fishers test	p-value
Inhalants					
Ever sniffed inhalants	7 (2.8)	2 (0.8)	9 (1.8)	2.829	0.176
Inhalants use in the past 12 months	3 (42.9)	1 (50.0)	4 (44.4)	0.032	0.999
Inhalants use in the past month					
None	6 (85.7)	1 (50.0)	7 (77.8)	3.595	0.444
1 or 2 times	1 (14.3)	0 (0.0)	1 (11.1)		
Nearly every week	0 (0.0)	1 (50.0)	1 (11.1)		
Nearly every day	0 (0.0)	0 (0.0)	0 (0.0)		
Age at 1 st Inhalants use(yrs) (Mean±SD)	14.9 ± 0.9	14.5 ± 0.7	14.8 ± 0.8	0.509 ††	0.626
Amphetamine					
Ever tried amphetamine	7 (2.8)	0 (0.0)	7 (1.4)	7.099	0.015
Amphetamine use in the past 12 months	3 (60.0)	0 (0.0)	3 (60.0)	<i>constant*</i>	<i>constant*</i>
Amphetamine use in the past month					
None	1 (20.0)	0 (0.0)	1 (20.0)	<i>constant*</i>	<i>constant*</i>
1 or 2 times	2 (40.0)	0 (0.0)	2 (40.0)		
Nearly every week	1 (20.0)	0 (0.0)	1 (20.0)		
Nearly every day	1 (20.0)	0 (0.0)	1 (20.0)		
Age at 1 st Amphetamine in years (Mean±SD)	11.8 ± 2.0	Nil	11.8 ± 2.0	<i>constant*</i>	<i>constant*</i>
Barbiturates/Sedatives					
Ever used Barbiturates	7 (2.8)	3 (1.2)	10 (2.0)	1.633	0.339
Barbiturates use in the past 12 months	7 (87.5)	3 (100.0)	10 (90.9)	0.413	> 0.999
Barbiturates use in the past month					
None	1 (12.5)	0 (0.0)	1 (9.1)	5.418	0.109
1 or 2 times	1 (12.5)	0 (0.0)	1 (9.1)		
Nearly every week	6 (75.0)	1 (33.3)	7 (63.6)		
Nearly every day	0 (0.0)	2 (66.7)	2 (18.2)		
Age at 1 st Barbiturates in years (Mean±SD)	13.6 ± 1.7	13.3 ± 0.6	13.6 ± 1.4	0.285 ††	0.782

** Fisher's exact test †† T-test *Constant** means p-value could not be computed because only one group was available

Table 4. Prevalence of substance use continued

Variables	In-school N=250(%)	Out-of-school N=250(%)	Total (%)	Fishers test	p-value
Opiates					
Ever tried opiates	19 (7.6)	60 (24.0)	79 (15.8)	25.271	< 0.001
Opiates use in the past 12 months	17 (89.5)	59 (95.2)	76 (93.8)	0.812 **	0.334
Opiates use in the past month					
None	2 (10.5)	5 (8.1)	7 (8.6)		
1 or 2 times	6 (31.6)	14 (22.6)	20 (24.7)		
Nearly every week	7 (36.8)	29 (46.8)	36 (44.4)	6.106 **	0.163
Nearly every day	1 (5.3)	12 (19.4)	13 (16.0)		
Don't know	3 (15.8)	2 (3.2)	5 (6.2)		
Age at 1 st Opiates in years (Mean±SD)	14.4 ± 1.6	14.9 ± 1.4	14.8 ± 1.4	- 1.341 ††	0.184
Tranquilizers					
Ever tried Tranquilizers	1 (0.4)	3 (1.2)	4 (0.8)	1.008	0.623
Tranquilizers use in the past 12 months	1 (100.0)	1 (33.3)	2 (50.0)	1.333	> 0.999
Tranquilizers use in the past month					
None	0 (0.0)	2 (66.7)	2 (50.0)		
1 or 2 times	0 (0.0)	1 (33.3)	1 (25.0)	4.000	0.500
Nearly every week	1 (100.0)	0 (0.0)	1 (25.0)		
Nearly every day	0 (0.0)	0 (0.0)	0 (0.0)		
Age at 1 st Tranquilizers in years (Mean±SD)	10 ± 0.0	13.7 ± 0.6	12.8 ± 1.9	- 5.500 ††	0.032

** Fisher's exact test †† T-test

Table 5. Overall prevalence of substance Use among the participants

Variables		IN-School (%)	Out-of-school (%)	Total (%)	χ^2 values	p-value
Ever used any substance (including alcohol)	Yes	91 (36.4)	201 (80.4)	292 (58.4)	99.611	0.001
	No	159 (63.6)	49 (19.6)	208 (41.6)		
Used any substance apart from alcohol	Yes	47 (18.8)	142 (56.8)	189 (37.8)	76.771	0.001
	No	203 (81.2)	108 (43.2)	311 (62.2)		

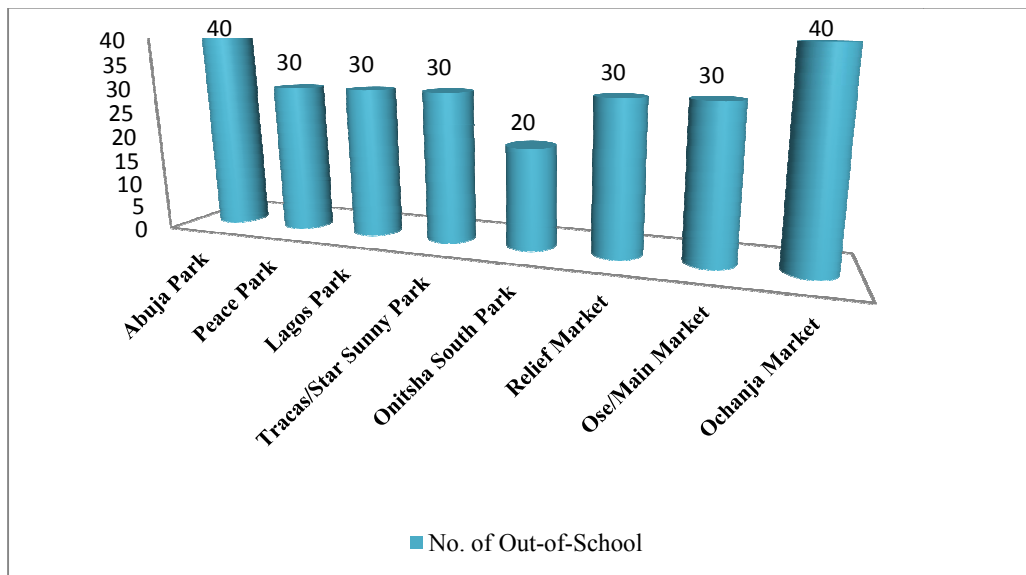


Fig. 3. Parks and market names of the out-of-school participants

4. DISCUSSION

This comparative study aimed to determine the prevalence of substance use between in-school and out-of-school adolescents in Onitsha metropolis. It was found that the overall prevalence of substance use was 58.4% and was higher among the out-of-school (80.4%) compared to the in-school (36.4%) participants. This was almost similar to a study conducted by Kanyoni et al in Rwanda where overall lifetime prevalence rate for substance use was 52.5% with in-school having prevalence of 32.6% while out-of-school 59.12%[7].

Furthermore, the overall prevalence of substance use without alcohol was also higher among the out-of-school compared to the in-school participants (56.8% versus 18.8%) while the mean age for the out-of-school participants were almost same (16.7 against 16.1). These corroborated the work done in Europe, that lifetime prevalence of substance use are also common among adolescents[19]. For the mean age, similar findings was documented by Oshodi et al which gave adolescent mean age of 15.9 years[20] while in Rwanda a contrasted lower mean age of 11.4years was recorded[7].

In this study, the female participants from in-school (44.8%) were lower compared to the males (55.2%). This was slightly similar though lower compared to the National gross enrolment ratio for female secondary students 32.67% but

higher than the Anambra State gross enrolment ratio of 24.46%[21]. Most of the in-school adolescents (82.9%) were involved only in household duties while their out-of-school counterparts were either hawking (46%), involved in unskilled labours (28.4%) or as apprentice (17.2%). The performing of these household duties may probably minimize the time for exposure to substance use by the in-school participants. Also being monitored by teachers, parents, or guardians may also reduce or stop this substance use. Participants from in-school living with parents up to 15years were higher compared to out-of-school while those living with grandparents and other relatives were higher among out-of-school compared to in-school respectively. In-school stay with mainly both parents shows adequate care and parenthood which is protective to substance use. These findings support several studies that emphasized the role of parents in improving the behaviours of their children with better ways to avert risky behaviours[22-24] while pathological family problems, broken homes on the other hand are possible factors that can increase risk for substance use[25].

Majority of the in-school participants got their money from the family members (parents), while most of the out-of-school participants worked for their money and earned salary. This supports the higher prevalence of substance in this study among out-of-school because of readily available disposable income which encourages the use of

substances. Available disposable income accompanied with poor parental supervision, watchfulness and care and ultimately ignorance can lead to experimentation of substances among out-of-school.

There was significantly higher prevalence of smoking among the out-of-school participants compared to the in-school. Similar pattern was seen in the 12 month prevalence. Those who smoke cigarette nearly every day were also significantly higher among the out-of-school compared to the in-school with a mean age at start of smoking being lower in the out-of-school compared to in-school. This was similar to the works of Kanyomi and UNODC regarding the prevalence of tobacco use[7,5].

In terms of life-time prevalence of opiates intake (codeine, tramadol), there was higher prevalence among the out-of-school compared to in-school which was also significant. There was no significant difference in the age at start of opiates intake between the out-of-school and in-school participants. The intake has become a specific public health problem among young people generally who smoke and drink because of lack of care and social dysfunction in the society. This has further prompted Government regulations on production, legislation (like the Hawking and False Advertisement of Medicinal Drug Prohibition Bill) to possibly curtail these acts[26-27].

For volatile solvents, the prevalence of abusing inhalants and other volatile solvents was higher among the in-school participants compared to the out-of-school, though not statistically significant. The mean age at first start of intake of inhalants was almost same. This also supports the study from WHO and Federal Ministry of Health reports that use of volatile organic solvents is widely spread among the street children, and some in-school adolescents[3].

Amphetamine use on the other hand was seen only among the in-school participants, with life-time prevalence of 2.8%. Among those that ever took amphetamine, a few was taking it almost on daily basis, however, this may be due to inaccessibility to this agent, or unavailability. Though sub-urban Onitsha is the bane for the production of metamphetamine in Anambra as reported by NDLEA[28]. However, its use among adolescent in the area have not been elucidated probably its use is restricted to older persons or that its accessibility and availability is still

guarded. The life-time prevalence of barbiturates intake was also higher among the in-school participants compared to the out-of-school but not statistically significant. Higher prevalence of intake of tranquilizers was among the out-of-school compared to the in-school participants. In-school use of these substances was to relief of stress and anxiety while out-of-school will possibly in addition to these reasons utilize such substances for exploits and escapades, as well as perpetrates crimes in the society.

5. CONCLUSION

This study has shown that substance use is common among in-school and out-of-school adolescents. The prevalence of substance use was significantly higher among out-of-school than in-school adolescents.

6. RECOMMENDATIONS

Parents should teach their children the dangers of substance abuse while desisting from it. Schools and governments should ensure inclusion of such in the curriculum as well as rehabilitative measures to those involved the act already.

DISCLAIMER

The products used for this research are commonly and predominantly used products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

CONSENT AND ETHICAL APPROVAL

Ethical approval for this study was obtained from the Nnamdi Azikiwe University Teaching Hospital Ethics Committee (NAUTHEC). Written informed consent was obtained from the respondents after explaining the purpose of the study and the procedure, and the assurance of confidentiality and freedom to opt out at any stage without any penalty whatsoever.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle4.com/review-history/68842>