



# Socio-Environmental Predictors of Substance Abuse among Out-of-School Adolescents

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**How to cite this paper:** Fashola, T.M., Adebisi, T.E., Ibrahim, L. and Obisesan, O.A. (2025) Socio-Environmental Predictors of Substance Abuse among Out-of-School Adolescents. *Open Access Library Journal*, 12: e13447.

<https://doi.org/10.4236/oalib.1113447>

**Received:** April 16, 2025

**Accepted:** June 10, 2025

**Published:** June 13, 2025

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## Abstract

This study investigated the socio-environmental predictors of substance abuse among out-of-school adolescents. The study adopted a quantitative research method and gathered data through the adaptation of standardized scales of measurements on peer pressure and substance abuse. Data was collected from 322 out-of-school adolescents from selected bus terminals in Ibadan, Oyo state. Descriptive statistics and inferential (Pearson  $r$  and ANOVA) were used in the study. From the findings, the prevalence of substance abuse among out-of-school adolescents can be found to be 39.1%. Also, a significant and positive relationship was found between substance abuse and peer pressure ( $r = 0.60$ ;  $p < 0.01$ ). Further, adolescents who indicated that their parents are active drug users reported the highest substance abuse (Mean = 19.181; SD = 4.010). In addition, adolescents who noted that their parents have a history of drug use reported the highest on substance abuse (Mean = 19.621; SD = 4.213). Adolescents who indicated that they are very close to drug purchase reported significantly higher substance abuse (Mean = 20.161; SD = 4.177). It was concluded from the study that peer pressure, parental use and proximity to drug sales were significant determinants of substance abuse among out-of-school adolescents. Concerned agencies were advised to offer policies that encourage more adolescents to enrol in formal education to prevent further increase of out-of-school adolescents in containing substance abuse menace.

## Subject Areas

Psychology

## Keywords

Substance Abuse, Adolescents, Peer Pressure, Parent, Proximity to Drug

## 1. Introduction

The use of substances remains a problem in most societies where there is a high number of adolescents and emerging adults who are found to be substance-dependent. The global prevalence of substance use remains at 2.2%, which translates to about 160 million individuals who are dependent on substances [1]. While a series of substances are commonly abused (e.g. marijuana, ecstasy, nicotine, etc.), the most abused substance is alcohol, consumed by 108 million individuals [1]. Between 5% and 20% of adolescents between the ages of 12 and 18 years old are found to report heavy drinking behaviour and use other forms of substances [2]. Precisely, about one-third of global adolescents are estimated to be abusers of substances, with alcohol being the most abused. This has further been projected to affect about 155 million adolescents [3]. This substance use problem among adolescents cuts across various continents, including Africa.

Adolescents often engage in dangerous conduct by using substances that are neither prescribed nor have significant health benefits for them [4] [5]. The initiation of substance use frequently arises from the desire to engage in experimentation and pursue novel encounters as observed is common among their peers [6]. Initiated by a need for exploration, repeated contact and utilization of substances ultimately result in problematic consumption, culminating in substance abuse [6]. Although alcohol continues to be the primary substance used by teens, the disorder is shown to reach its highest point between the ages of 18 and 25 years. This could be attributed to the fact that it is legally available and easily obtainable [7]. Johnston *et al.* [8] reported that most adults who ended up using substances began using them during their adolescence [9]. Seemingly, Gebeyehu *et al.* [10] reported that 39.7% of adolescents reported being first initiated into the use and abuse of alcohol, followed by 5%, who use cannabis, while 0.4% and 0.5% each reported being initiated into the use of heroin and cocaine respectively [11]. In a report by the National Survey on Drug Use and Health [12], it was indicated that an average of 6521 adolescents join the band of substance users every day in the United States of America, which runs to about 2.4 million adolescent substance users annually.

The prevalence of substance use among teenagers in sub-Saharan Africa is estimated to be between 10% and 44%, as stated by Asante and Kugbey [13], and Asante and Quarshie [14]. Obadeji *et al.* [15] documented that the prevalence of substance usage among adolescents in Nigeria is approximately 17%, with the majority of them being out of school. This is deemed high due to its continuous association with other adverse consequences. For example, it has been associated with a significant prevalence of societal issues such as increased school dropout rates, heightened antisocial behaviour, compromised mental well-being, and an elevated risk of developing psychosis in adulthood [16]-[18]. Substance abuse among teenagers has several additional consequences, such as increased involvement in unsafe sexual activities, heightened risk of unintended pregnancy, and greater susceptibility to sexually transmitted illnesses [19]-[21].

Given the negative outcomes linked with substance abuse among adolescents,

it is expedient to unravel how peer pressure, proximity to drugs and parental factors contribute to substance use among adolescents. Specifically, this study identified a gap in knowledge regarding this topic among out-of-school adolescents, as most studies on adolescent substance use have overly relied on in-school adolescents in Nigeria.

Peer pressure refers to behaviours that are borne out of influence from friends, which individuals do not have the intention of engaging in initially [22]. It is initiated by friends and executed based on friends' influence. Peer pressure means the subjective experience of being urged or dared to do something [22]. Peer pressure further means how individuals of the same pressure group influence each other into engaging in certain activities in which personal decisions would not have been to engage in such behaviour [23]. Either way, peer pressure means when an individual's behaviour is influenced by friends of the same group, either to perform a behaviour or abstain from it, often against personal decision. Having described peer pressure, studies have reported inconsistent findings on the link between peer pressure and adolescent substance use. Simons-Morton and Farhat [24] hold that the relationship between peer pressure and adolescent substance use has not been fully explored. Urberg *et al.* [25] also reported in their study that out-of-school adolescents who have friends who use substances are more likely to engage in substance use and abuse than those who do not.

In addition to peer pressure, parental characteristics are another set of factors that can impact substance use among teenagers. The parental factors examined in this study encompass the educational level of parents, their knowledge of substance use, and their history of substance use. Albert Bandura's [26] social learning theory posits that teenagers can acquire substance use patterns, which may eventually lead to substance abuse, by imitating the conduct of their friends. The social learning theory posits that drug abuse can occur when individuals imitate their local environment, either by having access to drugs or by emulating a family member who also engages in substance abuse.

Proximity to drug use is considered an environmental factor that could also influence the abuse of substances among adolescents. This refers to the extent to which it is easy or difficult to purchase drugs or substances for consumption purposes. It is presumed that having easy access to the purchase of substances could predispose an adolescent to develop an increased urge or tendency to abuse substances. Therefore, this study examines the influence of peer pressure, parental attitude and proximity to drugs on substance abuse among out-of-school adolescents.

Having introduced the variable and given the background to the study, the main aim of this is to investigate the socio-environmental predictors of substance abuse among out-of-school adolescents in Ibadan. The socio-environmental factors include peer pressure, parental attitude to drug use, and proximity to drugs. The following specific objectives will be achieved at the end of the study.

- 1) To determine the prevalence of substance abuse among out-of-school ado-

lescents in Ibadan;

2) To examine the relationship between peer pressure and substance abuse among out-of-school adolescents in Ibadan;

3) To investigate the influence of parental drug use on substance abuse among out-of-school adolescents in Ibadan;

4) To determine the influence of proximity to drugs on substance abuse among out-of-school adolescents in Ibadan.

## **2. Method**

### **2.1. Research Design**

In this study, the cross-sectional quantitative research design was adopted because it was observed that there is a load of research on various social and environmental factors in line with substance abuse among adolescents. The only missing link was inadequate research on out-of-school adolescents in Ibadan, Oyo state, Nigeria. Based on previous studies, therefore, the researcher was able to pre-empt a direction that the result might take, which is consequently subjected to being confirmed or disconfirmed. The research also adopted quantitative analysis because the researcher designed an instrument based on standardized scales of measurement, which are also conditions of using the quantitative research design.

### **2.2. Settings**

The study was carried out in Ibadan. Ibadan is the capital city of Oyo state and is regarded as the third largest city in Nigeria, only after Lagos and Kano, with about 15 million residents [27]. Ibadan is situated in Southwestern Nigeria, surrounded by hills [28]. Ibadan was selected because it houses more out-of-school adolescents in southwest Nigeria [29]. Most of these out-of-school adolescents are often located in bus stations and parks; hence, with the new construction of bus terminals, the majority were found in these two selected areas: Challenge and Ojoo.

### **2.3. Population and Sampling**

The population of the study is out-of-school adolescents in the Ibadan metropolis. This comprises adolescents between ages 18 and 19, who are meant to either be in the concluding part of their secondary school or about gaining admission into tertiary institutions. The following inclusion/exclusion criteria were followed:

- 1) Must be between 18 and 19 years old;
- 2) Must be able to read at most minor and write;
- 3) Must have left the school environment for a minimum of 1 year;
- 4) Must give consent to participate in the study.

The sample size was determined using the Cochran sample size calculator. This is used when the population is unknown [30]. The number of out-of-school children is not available to the researcher. Hence, the Cochran sample size calculator was applied and a sample size of 384 was calculated. Convenience sampling was adopted because out-of-school adolescents were selected at two major and newly

constructed bus terminals in the Ibadan metropolis. These individuals engage in petty trading at the bus terminals alone or as a group.

Data was practically gathered by visiting the bus terminals during school hours (Between 8 and 3 pm). It is expected that by this time of the day, adolescents who go to school must be in school. To make the process easier, the researcher recruited two research assistants who were master's degree holders in Psychology. They were briefed on the purpose of the study and how the data needs to be gathered in adherence to research ethics. At first contact, the participants were asked whether they attended any formal school. Those who answered negatively were further followed up with another question regarding how long they had left the shores of the school. Those who had left school for over a year were recruited to participate in the study. Although the survey was conducted online, participants were shown how to respond to the questions using the device provided by the researcher and research assistants. It was also a self-administered questionnaire. While 384 out-of-school adolescents were targeted, only 322 were retrieved and utilized for data analysis, yielding a response index of 90.4%. Other unused data either did not consent or were not filled.

## **2.4. Instrument**

The study used a well-structured questionnaire to gather data from out-of-school adolescents in Ibadan, Oyo. The Instrument was divided into three sub-sections.

### **2.4.1. Section A—Demographic Information**

This section comprised demographic information of respondents. The following variables will be contained in this section: Gender, age, and family background. Additionally, parental educational factors were also gathered, which include Parental educational qualification (Father and mother educational qualification), parental active use of substances, and history of substance use in the family.

### **2.4.2. Section B—Substance Abuse**

This section measures substance abuse among out-of-school adolescents. This was measured by adapting 15 items from the substance use scale developed by Mateo *et al.* [31]. Responses to the scale items are dichotomized into Yes and No. The criteria for a substance abuser according to the scale include; Persistent desire or unsuccessful efforts to cut down on substance, constant strong desire to use the substance, continual use despite interpersonal and social problems, and purchase of substance within the past 7 days. An individual is tagged a substance abuser if he/she displays at least two of the above. The scale developers reported an internal consistency of 0.70.

### **2.4.3. Section C—Peer Pressure**

This section measures peer pressure among out-of-school adolescents in Ibadan, Oyo state. This was measured using an 11-item scale developed by Santor *et al.* [32]. The scale was developed to measure the extent to which individuals are pressured to engage in behaviours that were not of the personal idea. Response format

ranged on a 5-point Likert: Strongly Disagree - Strongly Agree. The scale developers reported an internal consistency of 0.78.

## 2.5. Data Analysis

Both descriptive and inferential statistics were utilized in this study. Descriptive statistics of frequency, percentages, mean, and standard deviation were employed to test the demographic data, parental information, and substance abuse and peer pressure sections. Objective one was tested using mean and standard deviation to unravel the prevalence of substance abuse among out-of-school adolescents. Objective two was tested using Pearson's correlation. This was used to determine the relationship between peer pressure and substance abuse among out-of-school adolescents in Ibadan, Oyo state. The test of relationship establishes the relationship between two variables measured on a continuous scale of measurements [33]. Objective three was tested using One-Way analysis of variance (ANOVA) as the independent variable (Parental drug use) was measured on three levels of Yes, No, and Not Sure [34]. Objective four was also tested using One-Way analysis of variance (ANOVA) because the groups for proximity were three (Not close, somewhat close, and very close) [34].

## 2.6. Ethical Consideration

Ethical approval was obtained from the University of Ibadan Social Sciences Ethics Committee, with reference number: *UI/SSHREC/2024/077*. Specifically, the following ethical considerations were ensured.

**Informed consent:** The issue of informed consent was followed by ensuring that participants indicated that they understood the research and what they were about to participate in. They were also required to click the agreed button before proceeding with the remainder of the survey.

**Beneficence and non-maleficence:** While there was no tangible benefit in terms of material or monetary value to the participants, possible risks and harms were avoided. Respondents were not exposed to any physical risk as invasive methods were not adopted in getting responses. There was no psychological harm to the participants as well.

**Confidentiality and anonymity:** Respondents were assured of the utmost confidentiality of their responses. There was no demand for personal data or information from respondents. Also, respondents were assured of the safety of their responses. Emphasis was laid on the fact that the data will only be used for research and academic purposes.

**Voluntary participation:** Respondents were not coerced to participate in the study. They were also informed of their freedom to withdraw from the study when they felt uncomfortable participating.

## 3. Results

The study aims to investigate the socio-environmental predictors of substance

abuse among out-of-school adolescents in Ibadan. Four other sub-research objectives were also stated. These guided the development of the research instrument, which was subsequently used to gather the data to present the results in this chapter. Results are presented in sub-sections.

### 3.1. Demographic Characteristics and Drug Use

This section presents the frequency distribution of parental variables such as educational qualification, parental active substance use and history of substance use among parents/guardians. The result is presented in **Table 1**.

**Table 1.** Demographic Information and drug use.

Variable	Response	Frequency (n = 322)	Percentage
Gender	Male	196	60.9
	Female	118	36.6
	Non-binary/third gender	2	0.6
	Prefer not to say	5	1.6
	Others	1	0.3
Age	18 years	84	26.1
	19 years	238	73.9
Family background	Monogamous	257	79.8
	Polygamous	65	20.2
Father educational qualification	No formal education	10	3.1
	Primary	20	6.2
	Secondary/High school	67	20.8
	National Diploma	21	6.5
	Higher Diploma	43	13.4
	University degree	131	40.7
	Postgraduate degree	30	9.3
Mother educational qualification	No formal education	8	2.5
	Primary	19	5.9
	Secondary/High school	81	25.2
	National Diploma	25	7.8
	Higher Diploma	38	11.8
	University degree	133	41.3
	Postgraduate degree	18	5.6
Parental active substance use	Yes	83	25.8
	No	191	59.3
	Not sure	48	14.9
History of substance use among parents	Yes	66	20.5
	No	198	61.5
	Not sure	58	18

Frequency distribution shows that more of the respondents, 196 (60.9%), were males. Age distribution showed that more respondents, 238 (73.9%), were 19, while the additional 84 (26.1%) were 18. More respondents, 257 (79.8%), were from monogamous families. Frequency distribution according to father educational qualification shows that only 3.1% of the fathers do not have at least primary education as a formal learning. The other 96.9% indicated having at least primary education, with more fathers (40.7%) having a university degree. Also, 69.9% of the fathers had tertiary education, ranging from ordinary national diplomas to postgraduate degrees. The majority of the adolescents 97.5% indicated having at least primary education, with more mothers (41.3%) having a university degree. Also, 66.4% of the mothers had tertiary education, ranging from ordinary national diplomas to postgraduate degrees. Further, it is shown that more of the parents (Father, mother, or guardian), 59.3%, were no active substance users, while 25.8% of the parents, as reported by the adolescents, were active substance users. This implies that more of the parents do not use drugs, while only 14.9% were not sure whether their parents are actively involved in the use of substances or not.

Finally, more of the adolescents 61.5% indicated that there is no history of substance use by their parents. However, 20.5% of the adolescents indicated that there is history of substance use by their parents, while 18% were not sure. From the findings, it could be deduced that there is low parental use of substances and a history of substance use by the parents.

### 3.2. Prevalence of Substance Abuse among Out-of-School Adolescents

This section presents results of frequency distribution according to the abuse of substance by out-of-school adolescents and the result is presented in **Table 2**.

**Table 2.** Prevalence of substance abuse among adolescents.

Prevalence of substance abuse	Frequency	%
<i>Mean = 17.69</i>	<b>(n = 322)</b>	
<i>SD = 2.96</i>		
Low	196	60.9
High	126	39.1

**Table 2** presents results on the prevalence of substance abuse among out-of-school adolescents in Ibadan. The mean of substance abuse was found to be 17.69 (SD = 2.96). The standard was utilized to divide the composite score on substance abuse into two groups of high and low abusers. From the result, the prevalence of substance abuse among out-of-school adolescents can be found to be 39.1%.

### 3.3. Between Peer Pressure on Substance Abuse among Out-of-School Adolescents

This section presents results on the relationship between peer pressure and sub-

stance abuse among out-of-school adolescents in Ibadan. This was tested using Pearson r correlation, and the result is shown in **Table 3**.

**Table 3.** Pearson r correlation summary table showing results on the relationship between peer pressure and substance abuse.

Variables	Mean	SD	r	df	p
Substance abuse	17.69	2.96	0.60**	320	<0.01
Peer pressure	23.71	9.61			

\*\*Significant at 0.01 level.

**Table 3** presents results on the relationship between peer pressure and substance abuse among out-of-school adolescents in Ibadan, Oyo state. It is shown that there exists a significant relationship between substance abuse and peer pressure ( $r = 0.60$ ;  $p < 0.01$ ). The direction of the relationship is positive, hence implying that the higher the peer pressure, the higher the substance abuse. When adolescents experience a high level of peer pressure, they are pressured also to abuse drugs, and vice versa.

### 3.4. Parental Drug Use and Substance Abuse among Out-of-School Adolescents

This section presents results on the influence of parental drug use on substance abuse among out-of-school adolescents. This was tested using a One-Way analysis of variance (ANOVA), and the result is presented in **Table 4**.

**Table 4.** (a) One-Way ANOVA summary table showing results on the influence of parental drug use on substance abuse among adolescents; (b) Post-Hoc result on parental drug use and substance abuse.

(a)					
ANOVA					
Substance_Abuse					
	SS	df	MS	F	Sig.
Between Groups	247.718	2	123.859	15.465	0.000
Within Groups	2554.845	319	8.009		
Total	2802.562	321			

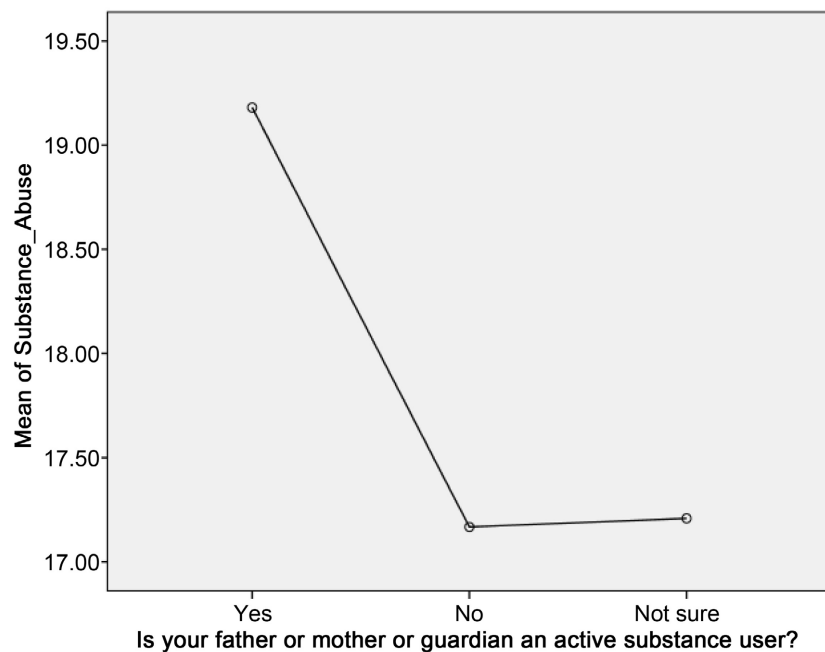
(b)						
SN	Parental drug use	1	2	3	Mean	SD
1	Yes	-			19.18	4.01
2	No	2.01*	-		17.17	2.30
3	Not sure	1.97*	0.04	-	17.21	2.23

\*Significant at 0.05 level.

**Table 4(a)** presents results on the influence of parental drug use on substance abuse among out-of-school adolescents in Ibadan. It is shown that parental drug use had a significant influence on substance abuse among out-of-school adolescents [ $F(2, 319) = 15.465$ ;  $p < 0.01$ ]. A further result is displayed in **Table 4(b)** and **Figure 1**.

From **Table 4(b)**, it is shown that there exists significant mean difference between those who indicated their parents to be active substance users and those whose parents are not active substance users. Also, there exists significant mean difference between adolescents who were not sure whether their parents are active substance users and those whose parents are not active users.

**Table 4(b)** further shows that adolescents who indicated that their parents are active drug users reported highest on substance abuse (Mean = 19.181; SD = 4.010), while those who indicated that their parents are not active drug users reported least on substance abuse (Mean = 17.168; SD = 2.297).



**Figure 1.** Parental drug use and substance abuse.

### 3.5. Parental History of Drug Use and Substance Abuse among Out-of-School Adolescents

This section tests the result on the influence of parental history of drug use on substance abuse among out-of-school adolescents. This was tested using one-way analysis of variance and the result is presented in **Table 5**.

**Table 5(a)** presents results on the influence of history of parental drug use on substance abuse among out-of-school adolescents in Ibadan. It is shown that parental history of drug use had significant influence on substance abuse among out-of-school adolescents [ $F(2, 319) = 19.901$ ;  $p < 0.01$ ]. Further result is displayed in **Table 5(b)** and **Figure 2**.

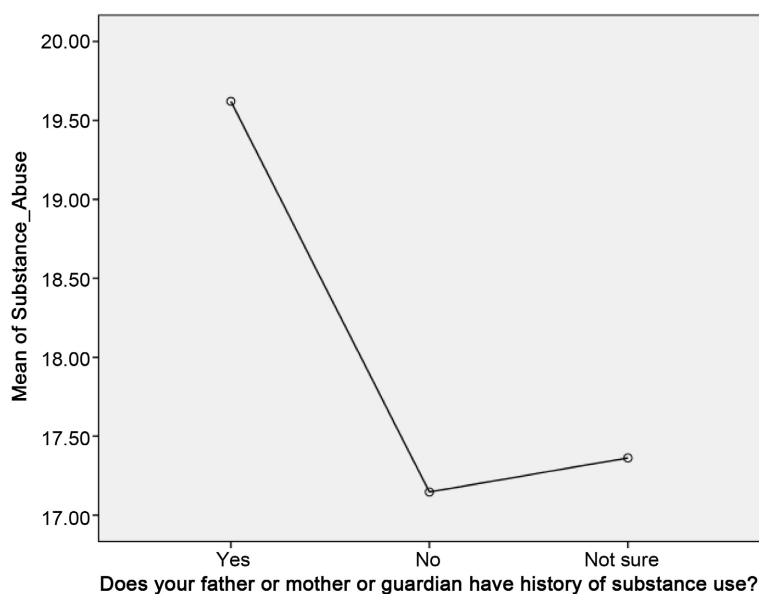
**Table 5.** (a) One-Way ANOVA summary table showing results on the influence of parental history of drug use on substance abuse among adolescents; (b) Post-hoc and Descriptive result on parental drug use history and substance abuse.

(a)					
ANOVA					
Substance_Abuse					
	SS	df	MS	F	Sig.
Between Groups	310.883	2	155.441	19.901	0.000
Within Groups	2491.679	319	7.811		
Total	2802.562	321			

(b)						
SN	Parental drug use	1	2	3	Mean	SD
1	Yes	-			19.62	4.21
2	No	2.48*	-		17.15	2.35
3	Not sure	2.25*	0.22	-	17.36	2.11

\*Significant at 0.05 level.



**Figure 2.** Parental history of drug use and substance abuse.

From **Table 5(b)**, it is shown that there exists significant mean difference between those who indicated their parents to have history of substance use and those with no history of substance use. Also, there exists significant mean difference between adolescents who were not sure whether their parents have history of substance use and those whose parents do not have any history of substance use.

**Table 5(b)** shows that adolescents who indicated that their parents have history of drug use reported highest on substance abuse (Mean = 19.621; SD = 4.213),

while those who indicated that their parents do not have history of drug use reported least on substance abuse (Mean = 17.362; SD = 2.109).

### 3.6. Proximity to Drug and Substance Abuse among Out-of-School Adolescents

This section presents results on the influence of proximity to drug on substance abuse among out-of-school adolescents. This was tested using one-way analysis of variance and the result is presented in **Table 6**.

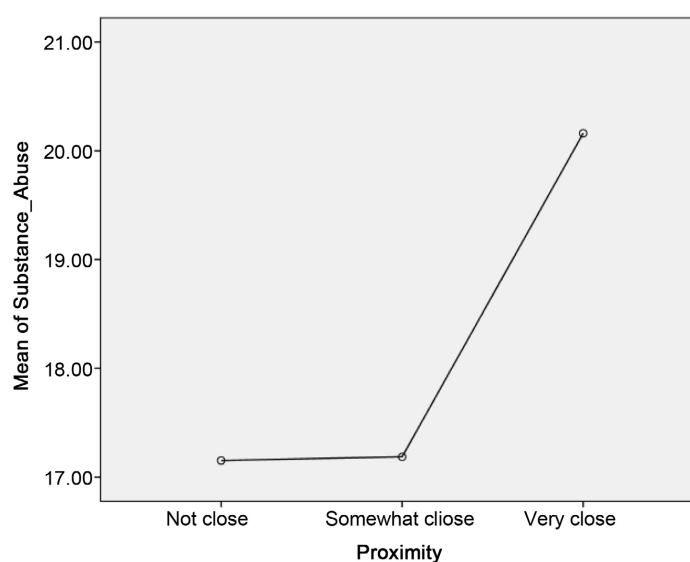
**Table 6.** (a) One-Way ANOVA summary table showing results on the influence of proximity to drug on substance abuse among adolescents; (b) Post-hoc and Descriptive result on proximity to drug purchase and substance abuse.

(a)					
ANOVA					
Substance_Abuse					
	SS	df	MS	F	Sig.
Between Groups	413.037	2	206.518	27.570	0.000
Within Groups	2389.525	319	7.491		
Total	2802.562	321			

(b)						
SN	Proximity	1	2	3	Mean	SD
1	Not close	-			17.15	2.37
2	Somewhat close	0.03	-		17.19	2.30
3	Very close	3.01*	2.97*	-	20.16	4.18

\*Significant at 0.05 level.



**Figure 3.** Proximity to drug and substance abuse.

**Table 6(a)** presents results on the influence of drug purchase proximity on substance abuse among out-of-school adolescents in Ibadan, Oyo state. It is shown that proximity to drug purchase had significant influence on substance abuse among out-of-school adolescents [ $F(2, 319) = 27.570$ ]. Further descriptive result is presented in **Table 6(b)** and **Figure 3**.

**Table 6(b)** shows that adolescents who indicated that they are very close to drug purchase reported significantly higher on substance abuse (Mean = 20.161; SD = 4.177), while those who indicated not close to where the sell drugs reported lowest on substance abuse (Mean = 17.152; SD = 2.373).

## 4. Discussion, Conclusion and Recommendations

### 4.1. Discussion and Conclusion

The study investigated the socio-environmental predictors of substance abuse among out-of-school adolescents in Ibadan. The findings indicate a concerning trend where out-of-school adolescents are primarily abusing prescription drugs, despite a lower overall prevalence of substance abuse within this group. This could suggest a unique vulnerability among out-of-school adolescents, potentially linked to factors such as increased accessibility to prescription medications or a lack of supervision. However, it is essential to consider alternative explanations. For instance, this demographic might have more opportunities to misuse medications due to less structured daily routines or reduced parental oversight. Additionally, the stigma surrounding illicit drug use could lead adolescents to opt for prescription drugs, which might be perceived as safer or more socially acceptable, thereby skewing the findings.

Moreover, the observation that a lesser proportion of out-of-school adolescents reported being affected by the drugs they use daily raises questions about the long-term impact of such substance use. One alternative explanation could be that these adolescents may not fully recognize the risks associated with prescription drug abuse, potentially underestimating the psychological or physical consequences. This lack of awareness could be compounded by a lack of education on substance use disorders, leading to a false sense of security. Furthermore, social environments that normalize or trivialize prescription drug use might contribute to this perception. Therefore, while the findings highlight a critical public health concern, they also underscore the necessity for comprehensive education and preventive measures tailored specifically for out-of-school adolescents.

Similarly, according to Gebremariam *et al.* [35], approximately 53% of individuals aged 15 and above worldwide have consumed alcohol at some time in their lives. The substances frequently consumed by individuals in this age group include alcohol, khat, cigarettes, hashish, cannabis, and cocaine, among several others [36].

The findings suggest a direct correlation between peer pressure and substance abuse among out-of-school adolescents, indicating that higher levels of peer in-

fluence lead to increased substance use. However, adolescents who are already predisposed to substance abuse may be more likely to seek out peers who engage in similar behaviours, creating a self-reinforcing cycle. This means that peer pressure may not be the sole driving factor; rather, it could be that individuals with a higher propensity for substance use naturally gravitate towards social circles that normalize or encourage such behaviours. Additionally, factors such as socioeconomic status, family dynamics, and mental health may also play significant roles in both the level of peer pressure experienced and the likelihood of substance abuse, complicating the narrative that peer influence is the primary cause.

Similarly, in their study, Nath *et al.* [37] investigated the factors that can predict substance abuse in teenagers. The study employed a methodical examination of existing literature and utilised data that specifically focused on individuals aged 12 to 19, commonly referred to as teenagers. Peer pressure was identified as one of the recurring elements that predict substance addiction among teenagers [38]. Peer pressure was consistently found to be a reliable predictor of substance addiction in teenagers.

Further, it was found that there exists a significant and positive relationship between parental active substance use and higher rates of substance abuse among out-of-school adolescents, suggesting that parental behaviour significantly influences adolescent choices. This correlation may be explained by modelling behaviour; adolescents often replicate the actions of their parents, perceiving substance use as a normalized behaviour. Furthermore, parental substance abuse may lead to an unstable home environment, characterized by neglect or lack of supervision, which can further exacerbate adolescent vulnerability to substance use.

However, it is important to note that the influence of parental substance use might intersect with other factors, such as socioeconomic status or community norms, which can also impact adolescent behaviour. In families where substance abuse is prevalent, broader social and environmental influences—like peer groups and neighbourhood environments—might also contribute significantly to adolescent substance use.

The study conducted by Khan *et al.* [39] affirmed the findings. Furthermore, Shakya *et al.* [40] investigated the impact of parental influence on substance use among teenagers. The study utilised a longitudinal survey approach and collected data in two separate waves. The study revealed that parental characteristics, such as the educational qualifications of parents and their history of substance use, were influential factors in determining substance use among teenagers.

It was discovered that proximity to drug purchases had a significant influence on substance abuse among out-of-school adolescents in Ibadan. Specifically, those who indicated to be very close to substance abuse reported highest on substance abuse; while out-of-school adolescents who indicated not close to drug purchase reported lowest on substance abuse. This is in line with the findings of Srivastava *et al.* [41], who reported that the environment where adolescents grew up contributes to their later involvement in substance use.

## 4.2. Recommendations of the Study

The following recommendations were made based on the findings of the study;

1) Firstly, it is recommended that there should be increased control of prescription drugs especially by Pharmacists. For instance, Pharmacists should be encouraged to only sell prescribed drugs on a Doctor's note, and stop the indiscriminate use of drugs. This will go a long way in controlling the abuse of prescription drugs.

2) Also, it was discovered that the higher the peer pressure, the higher the substance abuse among out-of-school adolescents. It is therefore recommended that concerned agencies in drug prevention and control should ensure to institute youth-friendly centres in identified parks where adolescents could engage in more productive activities.

3) In addition, it was discovered that parental factors contribute significantly to substance abuse among out-of-school adolescents in Ibadan. It is therefore recommended that parents and guardians should ensure to watch over their children's activities. When parents are aware that their behaviours influence their children, they are more conscious of certain behaviours such as the use of drugs and substances.

4) It is also recommended that parents should do intermittent screening of their children to ensure that they do not associate with friends who take and use substances.

5) It was discovered that proximity to where the drug is sold has a significant influence on substance use and abuse among out-of-school adolescents. It is therefore recommended that adolescents should be encouraged to attend schools during school hours. Law enforcement agents can also be used to ensure that children who ought to be in school are not found wandering around motor parks where drugs are being sold in high numbers. Also, parks can be intermittently swept by law enforcement agents to ensure that parks are free of drug sale and use.

6) Finally, it is recommended that more studies should be carried out on other factors that could contribute to increased substance use and abuse among out-of-school adolescents in Ibadan. This will help proffer more practical recommendations.

## Conflicts of Interest

The authors declare no conflicts of interest.

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