

# EXPLORING PARENTING STYLES AND COGNITIVE FUNCTIONING AS PREDICTORS OF SUBSTANCE ABUSE AMONG ADOLESCENTS IN MAKURDI METROPOLIS.

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## Abstract

*This research investigates parenting styles and cognitive functioning as predictors of substance abuse among secondary school students in Makurdi Local Government Area. A cross-sectional survey design was used for the study. The researcher used 250 secondary school students which comprises 133 (53.2%) males and 117(46.8%) females. The study used the Drug Abuse Screening Test (DAST-28), Parental Authority Questionnaire (PAQ,) and Cognitive Assessment Questionnaire (CAQ). Three hypotheses were formulated and tested using regression analysis. The result from the first hypothesis showed that parenting styles significantly predicted substance abuse among secondary school students in Makurdi  $F(1, 248)=6.536; P<.01]$ . The second hypothesis indicated that cognitive functioning significantly predicted substance abuse among secondary school students in Makurdi  $F(1, 248)=5.186; P<.05]$ . From the third hypothesis, it was shown that parenting styles and cognitive functioning jointly and significantly predicted substance abuse among secondary school students in Makurdi  $F(1, 247)=7.598; P<.01]$ . The findings of this study were discussed in line with other studies and conclusions were drawn. It was recommended among others that Clinicians in collaboration with the government should develop and evaluate interventions aimed at promoting positive parenting practices and enhancing cognitive skills in adolescents as a preventive measure against substance abuse, that School owners should Implement school-based screening programs to identify at-risk secondary school students based on their parenting environment, cognitive functioning, and early signs of substance use as early detection allows for timely intervention and support services to mitigate the risk of substance abuse.*

**Keywords:** Parenting styles, Cognitive functioning, Substance abuse, Makurdi metropolis

## Introduction

Substance use and abuse among adolescents remains a significant public health concern globally, with its prevalence and associated risks warranting thorough investigation. This prevalence involving alcohol, tobacco, and

other illegitimate medications among adolescents across the globe constitutes a public health concern (Abikoye & Adekoya, 2020; Ekpenyong & Aakpege, 2019). In Nigeria, as in many other parts of the world, adolescents in secondary schools are

particularly vulnerable to engaging in substance abuse behaviors (Idowu et al., 2018). Makurdi Metropolis, situated in the Benue State of Nigeria, presents a unique context for studying this issue due to its diverse socio-cultural landscape and the prevalence of substance abuse among its adolescent population (Eniojukan & Chichi, 2014). There is no doubt that substance abuse has become a pandemic affecting various aspects of life and should be given more attention by all.

Substance abuse among adolescents encompasses the use of various psychoactive substances such as alcohol, tobacco, and illicit drugs, which pose significant risks to physical health, psychological well-being, and academic performance (Leban & Griffin, 2020). It is a form of risk-taking behavior among adolescents that is linked with the manifestation of the general characteristics of adolescence as a stage of confusion, stress, curiosity, exploration, quest for experimentation, and identity search (Oputeh, 2022). Aside from adolescents in secondary schools, most young adults in tertiary institutions who are oblivious of the consequences of these substances in the quest for experimentation engage in their use resulting in various challenges including issues with their cognition. (Oputeh, 2019; Adewuyi, & Akinsola, 2019). Most of the illicit substances taken by adolescents, particularly exert adverse effects on the brain. The effects include, but are not limited to stimulated sedation and mood swings among this young population Understanding the factors that contribute to adolescent substance abuse is crucial for developing targeted interventions aimed at prevention

and mitigation (Jiloha, 2017).

Among the multitude of factors influencing adolescent substance abuse, parenting styles, and cognitive functioning have emerged as key predictors (Chassin et al., 2019; Reczek et al., 2017). Parenting styles, characterized by the patterns of parental behavior and interaction with their children, significantly impact adolescents' attitudes, behaviors, and decision-making processes regarding substance use (Meisel & Colder, 2022). Evidence has shown that parenting styles play key roles in reducing social and maladaptive behavioral patterns including substance abuse among youths (Kearns & Scott, et al., 2020). Authoritarian parenting, marked by stringent control and discipline coupled with limited warmth and communication, has been associated with an elevated likelihood of adolescent substance abuse. Parents adhering to this style often employ punishment and rigid regulations to manage their children's behavior, fostering feelings of rebellion and a propensity for risky behaviors like substance use (Chang, 2019). Conversely, permissive parenting, characterized by abundant warmth and support but deficient control and discipline, can also heighten the risk of substance abuse among adolescents. Parents adopting this approach may exhibit excessive leniency, failing to establish appropriate boundaries or offer guidance on prudent decision-making concerning substance use. Neglectful parenting, characterized by a dearth of both warmth and control, has been correlated with the highest incidence of adolescent substance abuse (Lamborn et al., 2021). Parents employing this style may exhibit disengagement from their children's lives,

neglecting to provide the necessary support and guidance for making healthy choices regarding substance use.

Cognitive functioning, encompassing cognitive abilities such as decision-making, impulse control, and risk perception, plays a pivotal role in shaping adolescents' susceptibility to substance abuse (Piehler & Winters, 2017). It plays a crucial role in both the onset and persistence of substance abuse disorders. A growing body of research underscores the intricate relationship between cognitive functioning and substance abuse, revealing various cognitive impairments associated with heightened susceptibility to substance abuse (Aharonovich, 2020). Individuals experiencing deficiencies in executive functioning, encompassing abilities such as planning, decision-making, and impulse control, face an elevated risk of developing substance abuse disorders (SADs) (Verdejo-Garcia, 2018). These impairments can pose challenges in resisting substance abuse temptations, planning for the future, and making sound decisions concerning substance use.

Despite the wealth of research on parenting styles, cognitive functioning, and substance abuse in adolescent populations, there remains a dearth of studies focusing on these variables within the specific context of Makurdi Metropolis. Therefore, this research seeks to address this gap by investigating the relationships between parenting styles, cognitive functioning, and substance abuse among secondary school students in Makurdi Metropolis. Through empirical investigation and analysis, this study aims to elucidate the

predictive power of parenting styles and cognitive functioning on substance abuse behaviors among adolescents in Makurdi Metropolis. By identifying these predictors, policymakers, educators, and healthcare professionals can develop targeted interventions to reduce substance abuse and promote the well-being of adolescents in the region.

### **Statement of the Problem**

Parenting styles and cognitive functioning pose a significant influence on adolescent substance abuse in communities and worldwide. Authoritarian parenting, characterized by strict rules, high demands, and low responsiveness, can lead to cognitive rigidity and poor decision-making skills in children and adolescents having impact on their substance Abuse. Children raised under authoritarian parenting may lack the ability to think critically and make independent choices. This can increase the likelihood of succumbing to peer pressure and experimenting with substances as a way to rebel or cope with stress. In Permissive Parenting where parents are highly responsive but have few demands or expectations, can result in children lacking self-discipline, impulse control, and problem-solving skills thereby resulting in Substance Abuse. Furthermore, Children raised in permissive environments may struggle with self-regulation and have difficulty resisting immediate gratification, making them more susceptible to substance abuse as they seek immediate pleasure without considering long-term consequences. Neglectful/Uninvolved Parenting Dangers characterized by low levels of both responsiveness and

demandingness, can lead to feelings of rejection, low self-esteem, and poor emotional regulation in children. This may result to the use and abuse of Substances. Children raised in neglectful environments may turn to substance abuse as a means of coping with emotional pain or seeking validation from peers when parental support is lacking. Lastly, Authoritative Parenting which combines high levels of responsiveness with reasonable demands and consistent discipline, fosters cognitive flexibility, autonomy, and emotional regulation in children. Children raised by authoritative parents are more likely to develop strong decision-making skills, self-esteem, and resilience. They are less likely to engage in substance abuse as they have the cognitive and emotional tools to resist peer pressure and make healthy choices.

While there is existing research on the relationship between parenting styles, cognitive functioning, and substance abuse among adolescents, much of it is based on data from Western cultures or larger urban centers. There may be cultural, social, or economic factors specific to Makurdi Metropolis that influence how parenting styles and cognitive functioning relate to substance abuse among adolescents in this particular context. Thus, there is a gap in understanding how these factors interact within the unique socio-cultural landscape of Makurdi and how they specifically contribute to substance abuse patterns among adolescents in the area. To bridge this gap, further research is needed that specifically focuses on Makurdi Metropolis and considers the local context when examining the relationship between parenting styles,

cognitive functioning, and substance abuse. By addressing this gap, researchers can provide insights that are more relevant and applicable to the local community, leading to more effective prevention and intervention efforts tailored to the specific needs of adolescents in Makurdi.

This study, therefore, aims to investigate the relationship between parenting styles, cognitive functioning, and substance abuse among adolescents in the Makurdi Metropolis. Specifically, it seeks to explore how different parenting styles (authoritarian, permissive, neglectful) and cognitive functioning (including executive functioning) predict the likelihood of substance abuse among adolescents in this urban setting

### **Baumrind's Theory of Parenting Styles**

This study is also guided by Baumrind's theory which was pioneered by Baumrind in 1966. She researched three parenting styles to describe normal parenting behavior that she categorized as; the authoritarian, authoritative, and permissive parenting styles (Kuppens & Ceulemans, 2019). Baumrind observed that pre-schoolers displayed markedly different types of behavior. She said that each type of behavior was highly associated with a specific kind of parenting. Baumrind placed these parents into two dimensions which are, responsiveness and demandingness. She further categorized the three kinds of parenting style to authoritative style which had a high receptiveness and high demandingness. This kind was outstanding in protecting their adolescents from risky behaviors and generation of

competence. The Authoritarian style has low receptiveness and high demandingness while the permissive style is characterized by high receptiveness and low demandingness (Doinita & Maria, 2015). Uninvolved parents permit their children to actively participate without being concerned about their activities.

These styles were later revised to four parenting styles by Maccoby and Martin in 1983 by adding the uninvolved parenting style. Kooraneh and Amirsardari (2015) agree that some behavioural problems in children are due to the defective relations of the family members and incorrect training methods by their parents. Positive parenting practices include parental warmth, honesty, continuous support, persistent monitoring, availability and setting of clear rules according to the age of the child. The approach parents take in raising their children is significant to their growth and the behaviours they will develop in the future (Raya, 2018). Therefore, when a child does not get the support needed in any stage of development, he or she is bound to look for support elsewhere. This may put the individual at risk of engaging in maladaptive behaviours like substance use. The concepts of this theory give a basis for the present study objectives in seeking to examine the influence of parenting styles on substance use among secondary school students in Makurdi.

### **Hypotheses**

i. Parenting styles will significantly predict substance abuse among secondary school students in Makurdi metropolis.

ii. Cognitive functioning will predict substance abuse among secondary school students in Makurdi metropolis.

iii. Parenting styles and cognitive functioning will jointly and significantly predict substance abuse among secondary school students in Makurdi metropolis.

## **METHOD**

### **Design**

The study adopted a cross-sectional survey design. This design gives us a substantial amount of information about the views, opinions, attitudes, and preferences of a large number of students in school. This design is more reliable because it deals with the natural setting to examine the variables and under-study.

### **Participants**

This study was conducted in Makurdi metropolis where some Secondary Schools were selected. Makurdi has a population of 341,152 according to the 2006 National Population Census. The participants for this study were 250 Secondary School Students across Makurdi Local Government Area. The descriptive statistics indicated that 7(2.8%) were 13 years, 26(10.4%) were 14 years, 37(14.8%) were 15 years, 52(14.8%) were 16 years, 52(20.8%) were 17 years, 41(16.4%) were 18 years, 27(10.8%) were 19 years, 10(4.0%) were 20 years and 18(7.2%) were 21 years old. For gender, 133(53.2%) were male and 117(46.8%) were female respondents. For religion, 191(76.4%) were Christianity, 44(17.9%) were Islam and 15(6.0%) were others who did not show their identity. For the ethnicity, 118(47.2%) were

Tiv, 64(25.6%) were Idoma, 33(13.2%) were Igede and 35(14.0%) were others. For the class, 73(29.2%) were Senior Secondary (SSI), 79(31.6%) were in SSII, 98(39.2%) were in SSIII respectively.

### **Instruments**

**Drug Abuse Screening Test (DAST-28):** The Drug Abuse Screening Test (DAST-28) was developed by Harvey (1980) *and is still an excellent screening tool. It is a 28-item self-report scale that consists of items that parallel those of the Michigan Alcoholism Screening Test (MAST). The DAST has "exhibited valid psychometric properties" and has been found to be "a sensitive screening instrument for the abuse of drugs other than alcohol.* This section of the questionnaire consists of Drug Abuse Screening Test developed (DAST-28) by Skinner, (1982) DAST is a 28-item questionnaire that left the participants for the study with the option of YES or NO. The 28 item DAST has excellent internal consistency reliability (alpha) at 0.95 for a total sample and 0.86 for the drug-abuse sample. Some of the items include 'Have you used drugs other than those required for medical reasons' and 'Have you used prescription drugs?

*Scoring and interpretation:* A score of "1" is given for each YES response, except for items 4, 5, and 7, for which a NO response is given a score of "1." Based on data from a heterogeneous psychiatric patient population, cut off scores of 6 through 11 are considered to be optimal for screening for substance use disorders. Using a cut off score of 6 has been found to provide excellent sensitivity for identifying patients with

substance use disorders as well as satisfactory specificity (identification of patients who do not have substance use disorders).

### **Parental Authority Questionnaire (PAQ):**

The questionnaire on the parenting styles of the respondents will be the Parental Authority Questionnaire (PAQ) developed by Baumrind's (1971). The PAQ is designed to measure parental authority, or disciplinary style, from the point of view of the child (of any age). The PAQ has three subscales: permissive (p: Items 1, 6, 10, 13, 14, 17, 19, 21, 24 and 28), authoritarian (A: Items 2, 3, 7, 9, 12, 16, 18, 25, 26 and 29) and authoritative/flexible (F: Items 4, 5, 8, 11, 15, 20, 22, 23, 27 and 30). The questionnaire contains a total of 30 items and the response pattern is the Likert format ranging from 1 = strongly disagree to 5 = strongly agree. Buri (1991) found an alpha of  $\alpha = .77$ , and test reliability of  $r = .72$ . Scoring: The PAQ is scored easily by summing the individual items to comprise the subscale scores. Scores on each subscale range from 10 to 50.

### **Cognitive Assessment Questionnaire: The adopted scale of Cognitive Assessment Questionnaire,**

originally called the cognitive failures questionnaire (CFQ) measures people's absent-mindedness, in everyday life slips and errors of perception, memory, and motor functioning by Broadbent et al., (1982). The most straightforward way to score the scale is simply to add up the ratings of the 25 individual items, yielding a score from 4=Very often, 3= Quite often, 2= occasionally, 1= Very rarely, 0= Never. Some of the items of the scale include; 'Do you read

something and find you haven't been thinking about it and must read it again' and 'Do you find you forget why you went from one part of the house to the other'. The coefficient alpha was 0.79. The correlations between each item and the total of all other Scoring the Scale The cognitive assessment questionnaire, originally called the cognitive failures questionnaire (CFQ) was developed by Broadbent et al., (1982) to assess the frequency with which people experienced cognitive failures, such as absent-mindedness, in everyday life - slips and

errors of perception, memory, and motor functioning. The most straightforward way to score the scale is simply to add up the ratings of the 25 individual items, yielding a score from 0-100.

### Results

Hypothesis one stated that parenting styles will significantly predict substance abuse among secondary school students in Makurdi metropolis. The hypothesis was tested using simple linear regression analysis and the result is presented in Table 1.

**Table 1: Simple Linear Regression showing Prediction of Parenting Styles on Substance Abuse among Secondary School Students in Makurdi metropolis**

Predictor variable	R	R <sup>2</sup>	df	F	η <sup>2</sup>	η <sup>2</sup>	Sig
Constant	.160	.026	1	6.536		9.334	.011
			248				
Parenting Styles					.160	2.557	.011

\*P<.05

The result from table above showed that parenting styles significantly predicted substance abuse among secondary school students in Makurdi metropolis [F (1,248) =6.536; P<.05]. This result implies that parenting styles influence substance abuse among secondary school students in Makurdi metropolis. Furthermore, findings from above revealed that perceived stress contributed to a small amount of 2.6% (R<sup>2</sup> = .026) variability in explaining substance

abuse among secondary school students in Makurdi metropolis. The hypothesis one was confirmed.

**Hypothesis Two** which sought to examine if cognitive functioning will significantly predict substance abuse among secondary school students in Makurdi metropolis was tested using simple linear regression and the result is presented in Table 2.

**Table 2. Simple linear regression scores showing prediction of cognitive functioning on substance abuse among secondary school students in Makurdi metropolis**

Predictor Variable	R	R <sup>2</sup>	Df	F	η <sup>2</sup>	η <sup>2</sup>	Sig
Constant	.143	.020	1	5.186		4.222	.024*
			248				
Cognitive functioning					.143	2.277	.024*

The result in Table 2 revealed that cognitive functioning significantly predicts substance abuse among secondary school students in Makurdi metropolis [F(1,248)= 5.186; P<.05]. This result implies that cognitive functioning is a predictor of substance abuse among secondary school students in Makurdi metropolis. More so, the result revealed that cognitive accounted for 2.0% ( $R^2 = .020$ ) total variance in explaining substance abuse among secondary school students in Makurdi metropolis. Based on this finding hypothesis

which stated that cognitive functioning will significantly predict substance abuse among secondary school students in Makurdi metropolis was confirmed.

**Hypothesis three** stated that parenting styles and cognitive functioning will jointly and significantly predict substance abuse among secondary school students in Makurdi metropolis was tested using Multiple linear regression and the result is presented in Table 3.

**Table 3: Multiple linear regression scores showing joint prediction of perceived stress and cognitive flexibility on resilience among physically challenged persons in Makurdi**

Predictor variable	R	R <sup>2</sup>	Df	F	η <sup>2</sup>	η <sup>2</sup>	Sig
Constant	.241	.058	2	7.598		3.042	.001**
			247				
Parenting styles					.112	1.795	.074
Cognitive functioning					.196	3.134	.002**

**\*\*P<.01**

The results in table 4.3 indicated that parenting styles and cognitive functioning jointly and significantly predicted substance abuse among secondary school students in Makurdi metropolis [F (2,47) = 7.598; P<.01]. This result implies that jointly, parenting styles and cognitive functioning are factors predicting substance abuse among secondary school students in Makurdi metropolis. The result further revealed that parenting styles and cognitive functioning jointly accounted for 5.8% ( $R^2 = .058$ ) variability in explaining substance among secondary school students in Makurdi metropolis. Based on this finding, hypothesis three which stated that parenting styles and cognitive functioning will jointly and

significantly predict substance abuse among secondary school students in Makurdi metropolis was confirmed.

### Discussion

The hypothesis which stated that parenting styles will significantly predict substance abuse among secondary school students in Makurdi metropolis. The hypothesis was tested using simple linear regression analysis and the result indicated that parenting styles significantly predicted substance abuse among secondary school students in Makurdi metropolis. This implies that parenting styles have major roles to play in substance abuse of among secondary school students. The result of this finding is in line with Berge and



Sundell (2020) who probed the impact of parenting style on adolescent substance use among junior high schools was assessed in the first semester of junior high school, and then again in the last semester of the 9th grade, 32 months later and revealed that neglectful parenting style was associated with worse substance use outcomes across all substances the study used a sample of cohort of 1268 adolescents. The result of this study is consistent with the research of Hellen (2020) who established from the findings that authoritarian, permissive, and uninvolved parenting styles had influenced on substance use among youths from treatment centers in Kiambu County. Descriptive research design with a target population of 30 recovering addicts and 6 counselors aged 18-35 years from WonderPeace. Pearson correlation was used to test relationships between independent and dependent variables. The findings of the study indicated that there was no significant relationship between authoritative parenting style and the youths' substance use. There was a significant relationship between authoritarian parenting and youths' substance use. There was also a strong positive relationship between both permissive and uninvolved parenting styles and the youths' substance use consecutively. In the same vein, this study concords with Siti and Ahmad (2019) who conducted to identify the relationship between parenting styles and the risk of drug abuse among youths. A set of questionnaires were distributed to respondents at IKTBN Chembong. Testing for hypotheses was carried out using the Pearson Correlation test. The findings show that there is a significant correlation between permissive parenting style and drug abuse risk. Authoritarian parenting lifestyle with

drug abuse risks showed a weak and positive relationship while for authoritative parenting style with drug abuse risks showed a weak and negative relationship.

The result of this study agrees with the findings of Eberechi (2022) who investigated parenting styles and tendency to abuse drugs among secondary school students in Obio/Akpor Local Government Area Rivers State. The research design used for the study was a correlational research design. The population of the study consists of (SS2) senior secondary school students in Obio/Akpor Local Government Area of Rivers State with a total population size of 11,920 while the study made use of a stratified sampling technique to select a sample size of 387 senior secondary school students for the study. Based on the analysis of the data, the findings of the study reveal that authoritative parenting style, authoritarian parenting style, and permissive parenting style have a significant relationship with secondary school students' tendency to abuse drugs in Obio/Akpor Local Government Area Rivers State. In collaboration with other findings, the result of this study agrees with Mosa et al. (2021) who study the relationship between parents' styles and substance abuse among high-school students. Multiple regression analysis was used to test research hypothesis. Participants included 265 high-school students selected randomly from high schools of Minab city and stated that permissive parenting style and authoritarian parenting style have a positive and significant relationship and authoritative parenting style has a negative and significant relationship with substance abuse.

The hypothesis which stated that cognitive functioning will significantly predict substance abuse among secondary school students in Makurdi metropolis it was tested using simple linear regression and result revealed that cognitive functioning significantly predict substance abuse among secondary school students in Makurdi metropolis. By implication, it means the cognitive functioning of secondary school students has a major contribution on their substance abuse. The result of this finding is consistent with that of Helsinki (2021) who investigated cognitive functioning and other correlates of Substance Use disorders (SUDs) in young adulthood in two representative population-based samples of young Finnish adults, one of which consisted of monozygotic and dizygotic twin pairs enabling genetically informative analyses. Using data from the population-based Mental Health in Early Adulthood in Finland (MEAF) study (n=605), the lifetime prevalence of DSM-IV any substance dependence or abuse among persons aged 21–35 years was found to be approximately 14%, with a majority of the diagnoses being alcohol use disorders. Several correlates representing the domains of behavioural and affective factors, parental factors, early initiation of substance use, and educational factors were individually associated with SUDs. The associations between behavioural and affective factors (attention or behaviour problems at school, aggression, anxiousness) and SUDs were found to be largely independent of factors from other domains, whereas daily smoking and low education were still associated with SUDs after adjustment for behavioural and affective factors. The result of this study also agreed

with Carolien (2019) whose study focuses on the prevalence of and differences in cognitive functioning across substances by means of a cognitive screen at the early stage of addiction treatment. The result of this study also support the work by Okoiye and Adebisi (2022) who investigated the effects of cognitive functioning therapy on drug abuse of senior secondary school students in Ibadan, Nigeria. The result of the study also agreed with that of Eremie and Bethel-Eke (2020) who investigated perceived influence of cognitive-functioning approaches on substance abuse prevention among senior secondary school students.

This hypothesis stated that parenting styles and cognitive functioning will jointly and significantly predict substance abuse among secondary school students in Makurdi metropolis and it was tested using multiple linear regression and the result revealed that perceived stress and cognitive functioning jointly and significantly predicted substance abuse among secondary school students in Makurdi metropolis. This implies that when parenting styles and cognitive functioning interact they influence substance abuse among secondary school students. The findings supported the work of Eberechi (2022) and Okoiye and Adebisi (2022) as they establish a significant influence of parenting styles and cognitive functioning on substance use. Also, Mosaet al. (2021) maintained that parenting styles determines a person's substance use behaviour which is in line with Carolien (2019) as shown in their work. This study maintained that parenting styles and cognitive functioning as predictors of substance abuse among secondary school students in Makurdi metropolis.

## Conclusion

It was concluded that:

- I. Parenting styles** significantly predicted substance abuse among secondary school students in Makurdi metropolis.
- ii. Cognitive functioning** predisposes Secondary school students to substance use in Makurdi metropolis.
- iii. Parenting styles and cognitive functioning** jointly determine substance abuse among secondary school students in Makurdi metropolis

## Recommendations

- i. Development of intervention programs:** Clinicians in collaboration with the government should develop and evaluate interventions aimed at promoting positive parenting practices and enhancing cognitive skills in adolescents as a preventive measure against substance abuse. These interventions could include parenting workshops, school-based programs targeting cognitive development, and community initiatives to support families in fostering healthy parent-child relationships
- ii. Implementation of school-based screening programs:** School owners should Implement school-based screening programs to identify at-risk secondary school students based on their parenting environment, cognitive functioning, and early signs of substance use as early detection allows for timely intervention and support services to mitigate the risk of escalating substance abuse problems.

- iii. Community Collaboration:** the government should also foster collaboration between schools, healthcare providers, community organizations, and policymakers to implement comprehensive, multi-level approaches to preventing substance abuse among adolescents. Community-wide efforts can address socio-environmental factors, promote resilience, and create supportive environments for healthy development.

- iv. Peer Influence Dynamics:** More research is needed to investigate the interplay between parenting styles, cognitive functioning, and peer influence dynamics in predicting substance abuse among secondary school students as Peer relationships play a significant role in adolescent development and substance use behaviours, and understanding how these factors interact can inform targeted prevention strategies.

## Limitations

- i.** Data for the study were collected through self-report which has the tendency of generating fake responses in some cases. This is because respondents tend to respond to terms in ways that will not put them in bad light.
- ii.** Other limitations of the study is the sample size. It was quite difficult to determine the most appropriate sample size for the population of students in Makurdi. Because, the proper data could not be obtained on the exact

number of students. This is however, not to say that the result obtained from the study cannot be generalized as the researcher sampled reasonable number that could make generalization possible.

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