INFLUENCE OF PEER PRESSURE AND CIGARETTES USE ON MENTAL HEALTH OF SECONDARY SCHOOL STUDENTS IN MAKURDI METROPOLIS, NIGERIA

NALAH, Augustine Bala[1], AJA, Emmanuel Ogbaji[2] and PARAMJIT, Singh Jamir Singh[3]

[1] *Department of Psychology, Nasarawa State University, Keffi, Nigeria*
[2] *Makurdi, Benue State, Nigeria.*
[3] *School of Social Sciences, Universiti Sains Malaysia*

[1, 2, 3] *+2348068135247 / +2348136491154, +60125376912*

Corresponding Authors' Emails: *nalahaugustineb@gmail.com*
ORCID iD: *https://orcid.org/0000-0001-8254-8413*

ABSTRACT

This study investigated the influence of peer pressure and cigarettes use on mental health of secondary school students in Makurdi. The study adopted the cross-sectional survey design. Participants in the study were three hundred and sixty-eight (368) secondary school students domiciled in Makurdi, who were aged between 12 to 17 years old. The Peer Pressure Scale, Cigarette Use Scale and General Psychological Health Questionnaire were used to test the research hypothesis using multiple linear regression analysis. Result revealed a significant influence of peer pressure and cigarettes use on mental health of secondary school students domiciled in Makurdi [R=.327, R^2=.107, F(2,365)=21.860, p<.01]. In the model, cigarettes use made significant negative contribution (β = -.226), while peer pressure made positive (β = .203) contribution on mental health. Based on the result of this study, schools should prioritize health education by increasing awareness on the adverse mental health problems of cigarette smoking among adolescents. Psychotherapeutic services by clinical psychologists on cognitive-behavioural therapy (CBT) and psycho-education should emphasize the significance of positive influence of peer pressure on mental health of secondary schools students.

Keywords: *peer pressure, cigarette use, mental health, secondary school students, Makurdi*

INTRODUCTION

Mental health issues in adulthood can be traced to childhood and adolescent (Richert et al., 2020). Given that the years of adolescence in secondary schools are a very formative period, vulnerabilities to mental health problems can seriously affect the abilities and life of the student. Secondary school students at this age are facing many mental health problems such as depression, stress, anxiety, loss of appetite (Sharma, 2017), low mood, fatigue, insomnia, social dilemma and stigma, negative self-concept (Kumari, 2022). Other mental health problems that secondary school students are facing include emotional instability, social disorder, sleeplessness, inferiority complex, fear of deteriorating social status, and suicidal ideation (Bhatia, 2020). Therefore, it is especially important to pay attention to the material and psychological needs of young people and the factors that might affect their mental health.

From the moment of child birth, many parents try to help their children make healthy and wise decisions. As children mature, the impact of their parents' influence diminishes as the significance of their peers' opinions increases. The influence exerted by peers can result in the development of substance misuse behaviors, specifically cigarette smoking, which has the potential to negatively impact the mental health and overall well-being of secondary school students. According to the Center for Disease Control and Prevention (CDC) in 2023, smoking cigarettes elevates the likelihood of mortality from all causes, not exclusively those associated with cigarette consumption. Smoking cigarettes can result in various health issues, impairments, and harm to almost every organ in the body, including the development of cancer, heart disease, stroke, lung illnesses, diabetes, and chronic obstructive pulmonary disease (COPD), which encompasses emphysema and chronic bronchitis (Hodson, 2023). Smoking cigarettes also heightens the likelihood of developing tuberculosis, specific eye ailments, and immune system disorders, such as rheumatoid arthritis (Feldman et al., 2024).

Adolescents in secondary school have numerous mental health concerns and behavioral difficulties that are specific to their setting (Bhatia, 2020; Kumari, 2022; Sharma, 2017). Considering that the adolescent years spent in secondary schools are a crucial period for personal development, susceptibility to mental diseases can significantly impact a student's capabilities and overall quality of life. The abuse of substances such as cigarettes is a global health and social issue that affects both secondary school students and the broader society. This problem has a substantial impact on the physical and mental well-being of both users and non-users. Nevertheless, there is a prevailing agreement that individuals who face difficulties with substances such as cigarettes are more prone to developing additional mental health disorders. This can exacerbate the effectiveness of treatment, increase susceptibility to social problems, and impede the ability to lead a satisfactory life (Richert et al., 2020).

Prior attention was mostly directed towards the prevalence of cigarette use or misuse among adults. However, the current cause for alarm and concern lies in the rapid and unregulated integration of cigarettes into the daily lives of adolescents in secondary schools (Fagbule et al., 2021). Many of them are motivated by peer pressure, curiosity, experimentation, imitation, and observation. Adolescents seem to be primarily focused on engaging in behaviours driven by curiosity and participating in substance abuse activities that they acknowledge as both dangerous and socially acceptable within their peer group.

The alarming rate at which teenagers are embracing substances such as cigarettes is concerning, and it necessitates immediate action to reduce its negative effects on their mental well-being (Ferriera et al., 2019). The mental well-being of adolescents in secondary school age is crucial (García-Carrión et al., 2019). Adolescent students may experience difficulties in managing the diverse manifestations and intensities of peer pressure, which can potentially impact their mental well-being. In secondary school, peer pressure from friends is a significant contributing factor to cigarette smoking among students, which brings adverse health problems in the long-term like increased risk of brain damage, lung cancer, and reduces the health of the smokers in general.

Peer pressure can have detrimental effects on the mental health and well-being of adolescents as it compels them to compromise their individual identity in order to conform to or gain approval from their peers. Jelsma and Varner (2020) emphasized that substance use, specifically cigarette use, has a significant impact on peer pressure among secondary school adolescents. They found that this influence is the most powerful factor and when combined with cigarette use, it may contribute to the decline in mental health among adolescents. The mental well-being of students attending school is a crucial determinant of their present and future well-being. Impaired mental health can result in compromised physical health, hazardous behavioral consequences, and disruptive or unlawful conduct (Knifton & Inglis, 2020). Studies by Källmén & Hallgren (2021), Tao & Fisher (2022), Ferriera et al. (2019) and Livingston et al. (2022) have found that peer group bullying, discrimination, and cigarette smoking are all significant factors that impact the mental health of adolescents.

The absence of an age restriction on purchasing cigarettes in Nigeria has a substantial impact on peer pressure and the high prevalence of cigarette use among secondary school students. Individuals readily sell any item to anyone without hesitation. It is noteworthy that a majority of adults prefer to delegate the task of purchasing smokes and alcohol to youngsters. Approximately, 90% of adult smokers start smoking before the age of 20 year (Elegbeleye & Femi-Pearse, 2019). This indicates that it is crucial to reduce the rate of smoking among adolescents, as smoking typically starts during this stage of life. Many adolescents in secondary schools often form friendships with peers who share similar problems and circumstances, where they feel their situations will be understood and accepted (Littlecott et al., 2023). Peers have a direct or indirect impact on the engagement of high school adolescents in harmful activities, such as smoking. Barnes et al. (2024) state that direct peer pressure can manifest as explicit encouragement, dares, or direct offers of substances. Indirect peer influences can arise when young individuals

associate with peers who engage in drinking or smoking, thereby increasing the accessibility of these substances and fostering the belief that using them may enhance social acceptance. Raimi et al. (2019) state that the bulk of our knowledge regarding adolescent's mental health is derived from research conducted in developed countries. There is a significant lack of research on the mental health of secondary school students in undeveloped or developing countries, particularly in Nigeria and specifically in Makurdi-Benue State. This study aims to examine the impact of peer pressure and cigarette use on the mental health of secondary school students in the Makurdi.

The World Health Organization (WHO) defines mental health as a state of well-being where individuals are aware of their own capabilities, can effectively manage everyday stress, are productive and successful in their work, and are able to contribute to their community. Optimal psychological well-being is crucial during all phases of life, spanning from early infancy and adolescence to maturity. Mental health refers to the overall state of emotional, psychological, and social well-being. Smoking cigarettes can have numerous detrimental effects on the body and may impact the mental health and psychological well-being of individuals, particularly secondary school students who are relatively young in terms of age (Ferriera et al., 2019). The usage of cigarettes has evolved from the conventional consumption of sedatives, alcohol, cocaine, heroin, and cannabis to the use of a combination of many substances and herbs in order to attain maximum gratification and potentially fatal overdose. Participating in activities that involve smoking cigarettes during high school, particularly for those who started using them at a young age, can have a significant effect on mental health (Firth et al., 2023). Cigarette smoking has long-term, progressive, and accumulative health effects (Dai et al., 2022). Cigarette smoke is sufficiently light to be inhaled in excessive amounts. The addiction in question has traditionally been one of the most challenging addictions to overcome.

THEORETICAL FRAMEWORK

Cognitive Theory

Adolescence is a period of attentional development and is characterized by impulsive and risk-taking behaviors, with poorer performance observed during selective and divided attention tasks among smoking adolescents (Bi et al., 2017). The appearance of cognitive theory in cigarette consumption among adolescents was demonstrated by many scholars (Chaarani et al., 2019; Hamidullah et al., 2020). Previous cognitive studies conducted by Jacobsen et al. (2007) revealed that performance deficits in attentional tasks emanated from smoking-associated working memory impairments, which suggest that smoking behaviors impact the development and function of attentional brain circuits. Other studies demonstrated that smokers have reportedly have inferior parietal lobe (Akkermans et al., 2016, 2017), lower amounts of gray matter in the frontal cortex (Chaarani et al., 2019), and negatively correlated with smoking dependency (Li et al., 2015). Similarly, Bi et al. (2017) established that the resting-state functional connectivity (RSFC) of adolescent smokers was lower between the anterior insula and amygdala compared to non-smokers. In contrast, Fedota et al. (2018) revealed the appearance of cognitive impairment in cigarette smoking among adolescents. They opined that though dorsolateral PFC (DLPFC) was negatively correlated with smoking dependency. However, DLPFC and inferior parietal cortex may be reduced during acute smoking abstinence.

Furthermore, the effect of cigarette smoking or tobacco use disorder (TUD) on cognitive function remains an active area of research. Cigarette smoking is disproportionately common among individuals with psychiatric comorbidities and low socio-economic status including those with another substance use disorder (SUD) (Jamal et al., 2016; Prochaska et al., 2017). In most cases, high rates of smoking are reportedly observed among individuals with psychiatric disorders including substance use disorders (SUD), major depression, schizophrenia, attention deficit hyperactivity disorder (ADHD) and bipolar disorder. The individuals with psychiatric comorbidities start smoking early in life, are less likely to quit smoking because they dependent on tobacco and

consume more cigarettes (Prochaska et al., 2017). Growing evidence suggested that the psychiatric disorders are associated with various cognitive impairments, including working memory, deficits in attention, and response inhibition functions (Millan et al., 2012; Sofuoglu et al., 2016), making it difficult for individuals with psychiatric disorders to quit smoking due to its cognitive enhancing effects (Besson & Forget, 2016). In addition, other studies suggests that individuals with cognitive deficits may be both more vulnerable to cigarettes smoking, have cognitive deficits in general intelligence, processing speed, auditory–verbal and visuospatial learning, cognitive efficiency, visuospatial memory, and executive skills (Durazzo et al., 2012; Valentine & Sofuoglu, 2018). They demonstrated deficits in impulse control functions, working memory, attention, severe dependence (Wagner et al., 2013).

Social Learning Theory

This study is based on the social learning theory established by Albert Bandura in 1977. Albert Bandura's social learning theory highlights the significance of observing, modeling, and imitating the behaviors, attitudes, and emotional responses of others. Social learning theory examines the interplay between environmental and cognitive elements in shaping human learning and behavior (Bouchrika, 2024). However, this study posits that family and peer interactions have a substantial impact on adolescent cigarette and substance use, as they serve as the key institutions for moral development. According to the theory, “individuals acquire the habit of using cigarettes, alcohol, or drugs through small and informal peer networks (Akers et al., 2004; Bahr et al., 1995). Adolescent secondary school students are taught about the positive or negative aspects of cigarette usage in formal groups (Akers & Jensen, 2006). The social learning theory posits that adolescents in secondary school acquire the behavior of smoking cigarettes by observing, imitating, and reinforcement or receiving reward.

The present study suggests that peer influence significantly rises during the secondary school years of adolescence and has a significant impact on the attitudes and behaviors of students, particularly in relation to the prevalence of cigarette use among secondary school students. It is frequently seen that many children exhibit deviant behaviors that differ from what they are taught at home after they gain freedom, particularly those attending boarding schools. Non-smoking students residing in smoke-free households can be encouraged by their classmates to engage in smoking as a means of demonstrating maturity and a sense of belonging. Being exposed to deviant attitudes and behaviors raises the probability that individuals may adopt and internalize these attitudes themselves. It is a well-known fact that certain children, who are innocent and well-behaved in the presence of their parents, engage in harmful behaviors such as smoking cigarettes as soon as they leave their houses to go to school or meet up with female friends. The core perspectives and convictions regarding peer influence and deviant behaviours, such as smoking cigarettes that can result in cancer and impaired mental well-being, are mostly formed and shaped through social learning.

This study seeks to investigate the impact of peer pressure and cigarette usage on the mental well-being of secondary school students in Makurdi. The present study proposes the development of a conceptual framework to understand the impact of peer pressure and cigarette use on mental well-being. This framework will facilitate the establishment of cigarette rehabilitation centers and the implementation of psychotherapeutic interventions aimed at preventing and assisting secondary school students who are affected by cigarette use. Therefore, the study provided the following hypothesis, “peer pressure and cigarettes use will significantly influence mental health of secondary school students in Makurdi, Nigeria.”

METHODS

Research Design

The study utilized a cross-sectional survey design to examine the influence of peer pressure and cigarette usage on the mental health of secondary school students in Makurdi. This was done by

administering standardized instruments. The cross-sectional study design is suitable for this study as it involves the adoption of distinct groups of individuals who vary in the variable of interest. This design enables the researcher to simultaneously compare many variables.

Population

This survey was conducted among adolescents in secondary schools located within Makurdi, Benue State, which has an estimated population of around 5,714,815 million individuals (National Population Commission and National Bureau of Statistics Estimates, 2016). The study focuses on a specific group of individuals, consisting of 4,722 students from twelve secondary schools. These schools were chosen based on certain criteria, with 2 schools selected from each of the 6 main areas within Makurdi.

Setting

This study was carried out among adolescents in secondary schools situated within Makurdi, Benue State. Makurdi is the capital town of Benue State with a projected population figure of about 365,648 million people as of (National Population Commission and National Bureau of Statistics Estimates, 2016). The town has private and government secondary schools, ethnic backgrounds with majority of them from Tiv, Igede and Idoma speaking tribes in the state. These institutions (school) provide education for thousands of secondary school students in Makurdi. These institutions with a total number of 4,772 students were selected dividing Makurdi into (6) strata, including; Northbank Axis, consisting of Tilley Gyado Memorial Secondary School and Day Spring School; Wurukum Axis, consisting of Christ Apostolic School and St. Theresa Secondary School; High Level Axis, consisting of Government Model Secondary School and Padopas Harmony Secondary School; Wadata Axis, consisting of Government College and Government Technical College; Modern Market Axis, consisting of Peace International School and Aveco Model College; and Kanshio Axis, consisting of Unique Secondary School and Wisdom Academy.

Participants

The study included a total of 368 secondary school students in Makurdi as participants. The sample size was determined using Taro Yamanne's 1976 sample size determination formula. A simple random sampling procedure was utilized to determine the sample size. In this approach, the researcher designed pieces of paper labeled with either the word 'yes' or 'no' and were deliberately folded to hide the label. Students were then instructed to select one of these paper fragments. Every student who selected 'yes' was sent with a questionnaire to complete. The total number of participant's characteristics are explained thus: 259 (70.4%) were male, 109 (29.6%) were female. Age ranged from 11-17 with mean age of 14.5 (SD=1.8). According to students' class, 57(15.5%) were in JSS1, 86 (23.4%) were in JSS2, 19(5.2%) were in JSS3, 41 (11.1%) were in SS1, 60(16.3%) were in SS2 and 105 (28.5%) were in SS3.

Data Collection and Instruments

For this study, three standardized tools were employed to gather data. The mentioned instruments include the Peer Pressure Questionnaire, Cigarette Dependence Scale, and General Psychological Health Questionnaire. The Peer Pressure Questionnaire (PPQ) is a component of the Peer Pressure and Popularity Scale, created by Palani and Mani (2016), which is used to evaluate the level of peer pressure experienced by the individuals being surveyed. The scale consists of 30 items and uses a 5-point scoring system, ranging from Strongly Agree to Strongly Disagree. The overall score is calculated by summing up the replies, which indicates the participants' level of peer pressure. The scale yielded a Cronbach alpha reliability coefficient of

.94. The Cigarette Dependence Scale (CDC-12), created by Etter, LeHouezec, and Perneger (2003), consists of 12-items. It utilizes a 5-point Likert style, with response options ranging from "Completely" to "A Little". The scale had high internal consistency with a Cronbach's alpha coefficient of >.84. Additionally, the scale showed good test-retest reliability with a correlation coefficient of greater than r > .77 over an 18-day interval. The General Psychological Health Questionnaire (GPHQ-12) is a 12-item survey developed by British scholar Goldberg in 1972 to measure mental health. It uses a 5-point Likert scale with response options ranging from "Better than usual" to "Much less than usual". A Cronbach's alpha coefficient of 0.87 was reported for this questionnaire, indicating high internal consistency.

Reliability Report

The reliability examination of the Peer Pressure Questionnaire (PPQ) revealed a Guttman split-half reliability value of .679 and an internal consistency of .803 Cronbach's Alpha. All 30 items in the analysis match the requirement set by Cristobal, Flavián, and Guinalíu (2007) for returning items on the scale. According to their criterion, an item must have a correlation of at least .30 with the total correlation. However, the Cigarette Use Scale demonstrated a Guttman split half reliability coefficient of .647 and an internal consistency of .905 Cronbach's alpha. Additionally, the item analysis of the 25 items met the criterion set by Cristobal, Flavián, and Guinalíu (2007), which requires each item to have a correlation of at least .30 with the total correlation in order to be included on the scale. The General Psychological Health Questionnaire (GPHQ-12) has been found to be highly reliable. It has a Guttman split-half reliability coefficient of .948 and an internal consistency of .735 Cronbach's Alpha. Additionally, the item analysis for the 12 items on the scale meets the criterion set by Cristobal, Flavián, and Guinalíu (2007), which states that each item must have a correlation of at least .30 with the total correlation.

Statistics Used

The data for this study were examined using multiple regression analysis to examine the impact of peer pressure and cigarette use on the mental health of secondary school students in Makurdi town.

RESULTS

The study utilized descriptive statistics to present the demographic variables through the use of frequencies, means, and percentages. On the other hand, multiple regression analysis is a statistical method used to test the null hypothesis. It examines the impact of peer pressure and cigarette use on the mental health of secondary school students in the Makurdi metropolis.

Descriptive Result of Participant's socio-Demographic Characteristics

Table 1 shows the demographic characteristics of Participants, secondary school students in Makurdi

Variables		Frequency	Percentages
Gender:	Male	259	70.4%
	Female	109	29.6%
Age Range:	12-14	210	57.1%
	15-17	158	42.9%
Tribe:	Tiv	189	51.4%
	Idoma	48	13.0%
	Igede	47	12.3%
	Hausa	49	13.3%
	Other Tribes	35	9.5%
Religious Affiliation:	Christian	314	85.3%
	Muslim	53	14.4%
	Other Religion	1	0.3
Educational Level:	JSS1	57	15.5%
	JSS2	86	23.4%
	JSS3	19	5.2%
	SS1	41	11.1%
	SS2	60	16.3%
	SS3	105	28.5%

The descriptive findings indicated that the majority of participants were 259 (70.4%) male secondary school students, with ages ranging from 12 to 17 and a mean age of 14.5 (SD=1.8). Table 1 reveals that the majority of participants, specifically 314 (85.3%), identified themselves as Christians. This was followed by 53 (14.4%) participants who indicated they were of the Islamic faith, and only 1 (0.3%) participant who belonged to another religion. In terms of tribal affiliation, 189 (51.4%) participants were from the Tiv speaking tribe, 48 (13.0%) were from the Idoma speaking tribe, 47 (12.3%) were from the Igede tribe, 49 (13.3%) were of Hausa extraction, and 35 (9.5%) belonged to other tribes. A notable issue is that the majority of participants, specifically 105 individuals (28.5%), were in SS3. The remaining participants were distributed as follows: 57 (15.5%) were in JSS1, 86 (23.4%) were in JSS2, 19 (5.2%) were in JSS3, 41 (11.1%) were in SS1, and 60 (16.3%) were in SS2.

Data Analysis

Hypothesis: This hypothesis posits that peer pressure and cigarettes use will significantly influence mental health of secondary school students in Makurdi, Nigeria. The hypothesis was tested using multiple regression analysis, and the outcome is displayed in Table 2.

Table 2: ***Multiple regression analysis showing the joint influence of peer pressure and cigarettes use on mental health of secondary school students in Makurdi***

Variable	R	R^2	df	F	β	t	Sig.
Constant	.327	.107	2,365	21.860		7.326	.000
Peer Pressure					.203	4.052	.000
Cigarettes Use					-.226	-4.511	.000

As shown in Table 2, the results demonstrated that the two variables collectively accounted for 10.7% of the overall variation found in the mental health of secondary school students in Makurdi. The analysis showed that both peer pressure and cigarette use had a combined impact on the mental health of secondary school students in the Makurdi. The correlation coefficient (R) was

.327, indicating a moderate relationship. The coefficient of determination (R2) was .107, suggesting that 10.7% of the variation in mental health could be explained by these factors. The F-statistic ($F(2,365) = 21.860$) was significant at $p < .01$, indicating that the relationship between these variables was statistically significant. In the model, cigarettes had a significant negative impact on the effect of mental health ($\beta = -.226$), whereas peer pressure had a significant beneficial impact on the influence of mental health ($\beta = .203$) among secondary school students in Makurdi. According to this outcome, the stated hypothesis was accepted.

DISCUSSION

The study's findings indicated that peer pressure and cigarette use have both significant positive and negative influence impact on the mental health respectively. The result is that the uncertainty of social situations and psychological factors determine the mental well-being of students. This example highlights the impact of peers in cultivating favorable attitudes and actions among students. These include activities like reviewing lecture notes during breaks, utilizing school resources such as the library and ICT centers, seeking clarification from teachers both inside and outside the classroom, participating in group discussions on taught topics, and engaging in school debates and competitions. The study validated that acquiring positive attitudes and behaviors from peers plays a substantial role in fostering healthy mental well-being among secondary school students. On the contrary, negative peer influence, such as smoking, alcohol consumption, involvement in cults, engaging in casual sexual relationships and prostitution, cheating on exams, and other anti-social behaviors, increases the likelihood of experiencing agitation, intense anger, hostility, aggression, feelings of hopelessness, helplessness, restlessness, trauma, and psychological distress, all of which have a negative impact on mental health.

The study conducted by Tram and colleagues aligns with the current research indicating that peer pressure and cigarette use exert a substantial impact on mental health (Tram et al., 2020). They investigated the correlation between the use of electronic cigarettes (e-cigarettes) and negative mental health conditions. Their findings revealed that e-cigarette users had the highest occurrence of poor mental health conditions. The logistic models revealed that the relationship between e-cigarette use and mental health was influenced by smoking status and sex. E-cigarettes have a diminished impact on smokers. In the multivariable modeling analysis, it was repeatedly shown that e-cigarette use was linked to negative mental health outcomes in both male and female smokers. This association remained significant even after accounting for other factors. The findings of current study aligns with Ebirim et al. (2014) in examining the occurrence of cigarette smoking among male adolescents attending school in Nigeria, as well as evaluating their understanding of the health consequences associated with smoking. The results revealed that 15.3% of secondary school students had ever smoked, whereas 11.2% were currently smoking. The average age at which individuals began smoking cigarettes was 14 years. Also, 63% of the participants demonstrated a strong understanding of the health issues linked to smoking cigarettes. Additionally, 36.1% reported that they were introduced to smoking by their friends, who provided them their first cigarette.

Moreover, the study's findings align with Afolabi et al. (2023) on research regarding the correlation between exposure to secondhand smoking (SHS) and its impact on self-reported anxiety, sadness, and vulnerability to smoking among teenagers. Research has revealed that adolescents who are exposed to secondhand smoking (SHS) have a greater likelihood of being susceptible to smoking cigarettes and experiencing depression. This association is particularly strong among girls living in crowded areas. Furthermore, this discovery aligns with the research conducted by Jelena et al. (2023), which investigated the relationship between peer pressure and the psychological well-being of senior high school students. The study revealed a notable association between peer pressure and the mental health of the students. Obosi et al. (2022) examined how peer pressure and substance usage affect the mental health of adolescents who are currently

attending school. Their research unveiled that the influence of peers and the consumption of substances exert an adverse effect on mental health.

The findings of this present study are consistent with the research conducted by Ukwayi et al. (2012), which investigated the relationship between peer pressure and tobacco smoking among undergraduate students. Their findings revealed that 46 percent of the tobaccos used by undergraduate students were attributed to peer pressure. Additionally, the ANOVA analysis demonstrated that peer pressure had a substantial impact on the tobacco use of undergraduate students. The model also indicated that a unit increase in the peer impact factor will lead to a 62% increase in the proportion of undergraduate students who use tobacco substances. Contrary to that, Mirošević et al. (2021) conducted a study on the mental health risks of students in relation to their vulnerability to peer pressure. The study found a statistically significant distinction in how students from the faculty of Pula and students from the faculty of Petrinja perceive certain traits related to susceptibility to peer pressure as potential threats to mental health. The finding is in line with the conclusion made by Long et al. (2020) regarding the correlation between mental health disorders and teenage peer relationships, which suggests that these relationships are linked to the emergence of mental health problems in adolescents.

Conclusion

This study has revealed that peer pressure has both positive and negative sides to it. Along the negative outcomes of peer pressure, most secondary school students within the adolescent age are prone to doing undesirable habits which significantly contribute to poor mental health and psychological distress. This implies that mental health issues like depression, risky sexual behaviours amongst others could be traced to peer pressure and cigarette use, which increase the tendency of exam malpractices, cultism, hookups and prostitutions, helpless, hopeless, restless, hostility, aggression, and other anti-social behaviours. Parents and institutions who prioritize positive attitude and behaviour among students have tendency of developing positive mental health among secondary school students. This also implies that most students who receive close guidance from parents and teachers have tendency of selecting the right friends and identifying anti-social behaviour among peer groups. Given the prevalence of cigarette use and mental health disorder among secondary school students (World Health Organization, 2018), psychotherapeutic intervention strategies involving the services of trained, certified and licensed clinical psychologists on cognitive-behavioural therapy and psycho-education across secondary schools to reduce the influence of peer pressure and cigarette use on student's mental health be considered.

Recommendations

The study's findings provided the following recommendations:

i. Increasing awareness of the mental health issues linked to cigarette smoking among adolescents through health education in schools, along with strict laws prohibiting the sale of cigarettes to secondary school students, will significantly reduce the high prevalence of adolescent smoking in our society.
ii. The study suggests that in the classroom, it would be beneficial to encourage positive impact of peer pressure for students. Students should be advised against rushing or succumbing to peer pressure in order to conform and be accepted by their peers. It is advisable for students to give importance to their mental health and should make it a priority to allocate time for relaxation, reflection, and establishing a structured routine in order to improve their overall state of mind.
iii. Educators, counselors, and school officials should recognize that children view teachers as primary responders for mental health support and essential facilitators of their sense of belonging. Therefore, school teachers should be mindful of adopting strategies that foster

well-being by discouraging the assignment of tasks that are due on the same day or the following day.

iv. Parents and guardians are advised to actively promote the education of their children regarding the concept of teen peer pressure, including its advantages and disadvantages in relation to their personal identity. The researchers advise parents to cultivate a strong parent-child bond to imbue their children with a sense of constant support, care, and presence.

v. The study suggests that licensed clinical psychologists should implement cognitive-behavioral therapy and psycho-education in secondary schools to mitigate the influence of peer pressure and cigarette use on students' mental health.

REFERENCES

Afolabi, O., Olufemi, E., & Olubukola, O. O. (2023). Adolescent's exposure to secondhand smoke and its association with susceptibility to smoking and mental health in Lagos, Nigeria. *The Pan African Medical Journal, 44*(202), 1-14. doi: 10.11604/pamj.2023.44.202.35973.

Akers, R. L., & Jensen, G. F. (2006). *Empirical Status of Social Learning Theory of Crime and Deviance: The Past, Present, and Future*. In F. T. Cullen, J. P. Wright, & K. R. Blevins (Eds.), *Taking stock: The status of criminological theory* (pp. 37–76). Transaction Publishers.

Akers, R. L., Sellers, C. S., & Jennings, W. G. (2004). *Criminological Theories: Introduction, Evaluation, and Application*. Los Angeles, CA: Roxbury Publishing Company.

Akkermans, S. E. A., Van Rooij, D., & Buitelaar, J. (2016). Effect of smoking on frontal cortical thickness: a longitudinal study in participants with a history of attention-deficit/hyperactivity disorder and healthy controls. *European Neuropsychopharmacology, 26*(2), S189-S190. 10.1016/S0924-977X(16)31026-4.

Akkermans, S. E. A., Van Rooij, D., Rommelse, N., Hartman, C. A., Hoekstra, P. J., Franke, B., et al.. (2017). Effect of tobacco smoking on frontal cortical thickness development: a longitudinal study in a mixed cohort of adhd-affected and -unaffected youth. *European Neuropsychopharmacology, 27*, 1022–1031. doi: 10.1016/j.euroneuro.2017.07.007.

Bahr, S. J., Marcos, A. C., & Maughan, S. L. (1995). Family, Educational, and Peer Influences on the Alcohol Use of Female and Male Adolescents. *Journal of Studies on Alcohol, 56*(4), 457–469. doi: 10.15288/jsa.1995.56.457.

Barnes, C., Janssen, L., Mantach, S., McCrabb, S., Turon, H., Groombridge, D., Bartlem, K., Bialek, C., Couper, C., & Wolfenden, L. (2024). Are text-message based programs targeting adolescents and their parents an acceptable approach to preventing adolescent e-cigarette use? 1-6. https://doi.org/10.1101/2024.04.18.24305994.

Besson, M., & Forget, B. (2016). Cognitive dysfunction, affective states, and vulnerability to nicotine addiction: A multifactorial perspective. *Frontiers in Psychiatry, 7*(160), 1-26. doi: http://dx.doi.org/10.3389/fpsyt.2016.00160.

Bhatia, A. (2020 October, 9). *World mental health day 2020: in numbers, the burden of mental disorders in India.* NDTV. Retrieved April 23, 2024 from https://swachhindia.ndtv.com/worldmental-health-day-2020-in-numbers-the-burden-of-mental-disorders-in-india51627.

Bi, Y., Yuan, K., Guan, Y., Cheng, J., Zhang, Y., Li, Y., Yu, D., Qin, W., & Tian, J. (2017). Altered resting state functional connectivity of anterior insula in young smokers. *Brain Imaging Behaviour, 11*, 155–165. doi: 10.1007/s11682-016-9511-z.

Bouchrika, I. (2024). *Social Learning Theory and its Modern Application in Education in 2024*. Retrieved April 1, 2024 from https://research.com/education/social-learning-theory.

Centers for Disease Control and Prevention (2023). *Current Cigarette Smoking among Adults in 2021 (Nations)*. Retrieved April 1, 2024 from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm.

Chaarani, B., Kan, K. J., Mackey, S., Spechler, P. A., Potter, A., Orr, C., et al.. (2019). Low smoking exposure, the adolescent brain and the modulating role of CHRNA5 polymorphisms. *Biological Psychiatry Cognitive Neuroscience and Neuroimaging, 4*, 672–679. doi: 10.1016/j.bpsc.2019.02.006.

Cristobal, E., Flavián, C., & Guinalíu, M. (2007). Measurement validation and effects on consumer satisfaction and web site loyalty. *Managing Service Quality, 17*(3), 317-340. doi: 10.1108/09604520710744326.

Dai, X., Gil, G. F., Reitsma, M. B., Ahmad, N. S., Anderson, J. A., Bisignano, C., Carr, S., Feldman, R., Hay, S. I., He, J., Iannucci, V., Lawlor, H. R., Malloy, M. J., Marczak, L. B., McLaughlin, S. A., Morikawa, L., Mullany, E. C., Nicholson, S. I., O'Connell, E. M., Okereke, C., … Gakidou, E. (2022). Health effects associated with smoking: a Burden of Proof study. *Nature Medicine, 28*(10), 2045-2055. doi: 10.1038/s41591-022-01978-x.

Durazzo, T. C., Meyerhoff, D. J., & Nixon, S. J. (2012). A comprehensive assessment of neurocognition in middle-aged chronic cigarette smokers. *Drug and Alcohol Dependence, 122*(1-2), 105–111. doi: http:// dx.doi.org/10.1016/j.drugalcdep.2011.09.019.

Ebirim, C. I. C., Amadi, A. N., Abanobi, O. C., & Illoh, G. U. P. (2014). The Prevalence of Cigarette Smoking and Knowledge of Its Health Implications among Adolescents in Owerri, South-Eastern Nigeria. *Health, 6*(12), 1532-1538. doi: 10.4236/health.2014.612188.

Elegbeleye, C., & Femi-Pearse, D. (2019). Incidence and Variables Contributing to the Onset of Cigarette Smoking among Secondary School Children and Medical Students in Lagos Nigeria. *British Journal of Preventive and Social Medicine, 30*(1), 66-70. doi: 10.1136/jech.30.1.66.

Etter J. F., LeHouezec, J., & Perneger, T. V. (2003). A Self-administered questionnaire to measure addiction to cigarettes: The Cigarette Dependence Scale. *Neuropsychopharmacology, 28*(2), 359-370. doi: 10.1038/sj.npp.1300030.

Fagbule, O. F., Kanmodi, K. K., Samuel, V. O., Isola, T. O., Aliemeke, E. O., Ogbeide, M. E., Ogunniyi, K. E., Nnyanzi, L. A., Adewuyi, H. O., Lawal, F. B., & Ibiyemi, O. (2021). Prevalence and predictors of cigarette smoking and alcohol use among secondary school students in Nigeria. *Annals of Ibadan Postgraduate Medicine, 19*(2), 112-123. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9484315/.

Feldman, C., Theron, A. J., Cholo, M. C., & Anderson, R. (2024). Cigarette Smoking as a Risk Factor for Tuberculosis in Adults: Epidemiology and Aspects of Disease Pathogenesis. *Pathogens, 13*(151), 1-16. https:// doi.org/10.3390/pathogens13020151

Ferriera, V. R., Jardima, T. V., Sousaa, A. L., Rosa, B. M., & Jardim, P. C. (2019). Smoking, alcohol consumption and mental health: data from the Brazilian study of cardiovascular risks in adolescents. *Addictive Behaviors Reports, 9*, 1-6. doi: 10.1016/j.abrep.2018.100147.

Firth, J., Wootton, R. E., Sawyer, C., & Taylor, G. M. (2023). Clearing the air: clarifying the causal role of smoking in mental illness. *World Psychiatry, 22*(1), 151-152. doi: 10.1002/wps.21023.

García-Carrión, R., Villarejo-Carballido, B., & Villardón-Gallego, L. (2019). Children and Adolescents Mental Health: A Systematic Review of Interaction-Based Interventions in Schools and Communities. *Frontiers in Psychology, 10*(918), 1-10. doi: 10.3389/fpsyg.2019.00918.

Hamidullah, S., Thorpe, H. H. A., Frie, J. A., Mccurdy, R. D., & Khokhar, J. Y. (2020). Adolescent Substance Use and the Brain: Behavioral, Cognitive and Neuroimaging Correlates. *Frontiers in Human Neuroscience, 14*(298), 1-27. doi: 10.3389/fnhum.2020.00298.

Hodson, R. (2023). Smoking an avoidable health disaster explained. *Nature, 618*, S2-S3. *doi:* https://doi.org/10.1038/d41586-023-01837-w.

Jacobsen, L. K., Slotkin, T. A., Mencl, W. E., Frost, S. J., & Pugh, K. R. (2007). Gender-specific effects of prenatal and adolescent exposure to tobacco smoke on auditory and visual attention. *Neuropsychopharmacology, 32*, 2453–2464. doi: 10.1038/sj.npp.1301398.

Jamal, A., King, B. A., Neff, L. J., Whitmill, J., Babb, S. D. & Graffunder, C. M. (2016). Current cigarette smoking among adults-united states, 2005-2015. *MMWR Morb. Mortal. Wkly. Rep., 65*(44), 1205–1211. doi: http://dx.doi.org/10.15585/mmwr.mm6544a2.

Jelena, M. C., Ayana, D. T., Oceana, L. S., & Jhoselle, T. (2023). The Correlation between Peer Pressure and Mental Well-Being among Senior High School Students. *Psychological Education, Document ID: PEMJ0*, 1-10. doi:10.5281/zenodo.6569859.

Jelsma, E. & Varner, F. (2020). African American adolescent substance use: The roles of racial discrimination and peer pressure. *Journal of Addictive Behaviors*, *101*, 1-8. doi: 10.1016/j.addbeh.2019.106154.

Källmén, H., & Hallgren, M. (2021). Bullying at school and mental health problems among adolescents: a repeated cross-sectional study. *Child and Adolescent Psychiatry and Mental Health, 15*(74), 1-7. https://doi.org/10.1186/s13034-021-00425-y

Knifton, L., & Inglis, G. (2020). Poverty and mental health: policy, practice and research implications. *BJPsych Bulletin, 44*(5), 193-196. doi: 10.1192/bjb.2020.78.

Kumari, B. (2022). Mental Health of Secondary School Students: Issues and Challenges. *Journal of Advance Research in Science and Social Science (JARSSC): Official Publication of Indian Mental Health & Research Centre, 5*(1), 52-69. doi: 10.46523/jarssc.05.01.05.

Li, Y., Yuan, K., Cai, C., Feng, D., Yin, J., Bi, Y., Shi, S., Y, D., Jin, C., von Deneen, K. M., Qin, W., & Tian, J. (2015). Reduced frontal cortical thickness and increased caudate volume within fronto-striatal circuits in young adult smokers. *Drug and Alcohol Dependence, 151,* 211–219. 10.1016/j.drugalcdep.2015.03.023.

Littlecott, H. J., Moore, G. F., Evans, R. E., Melendez-Torres, G. J., McCann, M., Reed, H., Mann, M., Dobbie, F., Jennings, S., Donaldson, C., & Hawkins, J. (2023). Perceptions of friendship, peers and influence on adolescent smoking according to tobacco control context: a systematic review and meta-ethnography of qualitative research. *BMC Public Health, 23*(1), 424. doi: 10.1186/s12889-022-14727-z.

Livingston, J. A., Chen, C-H., Kwon, M., & Park, E. (2022). Physical and mental health outcomes associated with adolescent E-cigarette use. *Journal of Pediatric Nursing, 64*, 1-17. https://doi.org/10.1016/j.pedn.2022.01.006.

Long, E., Gardani, M., McCann, M., Sweeting, H., Tranmer, M., & Moore, L. (2020). Mental health disorders and adolescent peer relationships. *Social Science & Medicine*, *253*, 1-8. doi: 10.1016/j.socscimed.2020.112973.

Millan, M. J., Agid, Y., Brüne, M., Bullmore, E. T., Carter, C. S., Clayton, N. S., Connor, R., Davis, S., Deakin, B., DeRubeis, R. J., Dubois, B., Geyer, M. A., Goodwin, G. M., Gorwood, P., Jay, T. M., Joëls, M., Mansuy, I. M., Meyer-Lindenberg, A., Murphy, D., … Young, L. J. (2012). Cognitive dysfunction in psychiatric disorders: characteristics, causes and the quest for improved therapy. *Nature Review Drug Discovery, 11*(2), 141–168. doi: http://dx.doi.org/10.1038/nrd3628.

Mirošević, J. K., Radetić-Paić, M., & Prskalo, I. (2021). Students' mental health risks regarding susceptibility to peer pressure. *Acta Kinesiologica*, *1,* 60–67. doi:10.51371/issn.1840-2976.2021.15.1.7.

National Population Commission and National Bureau of Statistics Estimates (2016). *National Population Estimates 2006-2016*. Retrieved April 1, 2024 from https://nigerianstat.gov.ng/elibrary/read/474.

Obosi, A. C., Fatunbi, A. M., & Oyinloye, O. (2022). Peer pressure and substance use as predictors of mental health among in-school adolescents in Nigeria. *Ianna Journal of Interdisciplinary Studies*, 4(1), 1-9.

Palani, V., & Mani, S. (2016). Exploratory Factor Analysis: Development of Perceived Peer Pressure Scale. *International Journal of Information Science and Computing*, *3*(1), 31-41. doi: 10.5958/2454-9533.2016.00004.1

Prochaska, J. J., Das, S., & Young-Wolff, K. C. (2017). Smoking, Mental Illness, and Public Health. *Annual Review of Public Health, 38,* 165–185. http://dx.doi.org/10.1146/annurev-publhealth-031816-044618.

Raimi, M. O., Abdulraheem, A. F., Major, I., Ebikapaye, O., & Bilewu, O. O. (2019). Public Health Impact of Substance Use on Adolescent: A Snapshot of Yenagoa in Bayelsa State, Nigeria. *American Journal of Biomedical Science & Research, 4*(3), 000796. doi: 10.34297/AJBSR.2019.04.000796.

Richert, T., Anderberg, M., & Dahlberg, M. (2020). Mental health problems among young people in substance abuse treatment in Sweden. *Journal of Substance Abuse Treatment, Prevention, and Policy, 15*(1), 1-10. doi: 10.1186/s13011-020-00282-6.

Sharma, P. [ece]. (2017, February 1). Mental health [Video]. YouTube. Retrieved April 21, 2024 from https://www.youtube.com/watch?v=TkPJtxzZ7kI&t=177s.

Sofuoglu, M., DeVito, E. E., Waters, A. J., & Carroll, K. M. (2016). Cognitive function as a transdiagnostic treatment target in stimulant use disorders. *Journal of Dual Diagnosis, 12*(1), 90–106. doi: http://dx.doi.org/ 10.1080/15504263.2016.1146383.

Tao, X., & Fisher, C. B. (2022). Exposure to Social Media Racial Discrimination and Mental Health among Adolescents of Color. *Journal of Youth and Adolescence, 51*(1), 30-44. doi: 10.1007/s10964-021-01514-z.

Tram, P., Jeanne, V. A. W., Asmita, B., Ashley, K. D., Leah, J. I., & Scatt, B. P. (2020). Electronic cigarette use and mental health: A Canadian population-based study. *Journal Affective Disorders, 260*, 646-652. doi: 10.1016/j.jad.2019.09.026.

Ukwayi, J. K., Eja, O. F., & Unwanede, C. C. (2012). Peer Pressure and Tobacco Smoking among Undergraduate Students of the University of Calabar, Cross River State. *Higher Education Studies, 2*(3), 92-101. doi:10.5539/hes.v2n3p92.

Valentine, G., & Sofuoglu, M. (2018). Cognitive Effects of Nicotine: Recent Progress. *Current Neuropharmacology, 16*(4), 403-414. doi: 10.2174/1570159X15666171103152136.

Wagner, M., Schulze-Rauschenbach, S., Petrovsky, N., Brinkmeyer, J., von der Goltz, C., Gründer, G., Spreckelmeyer, K. N., Wienker, T., Diaz-Lacava, A., Mobascher, A., Dahmen, N., Clepce, M., Thuerauf, N., Kiefer, F., de Millas, J. W., Gallinat, J., & Winterer, G. (2013). Neurocognitive impairments in non-deprived smokers--results from a population-based multi-center study on smoking-related behavior. *Addiction Biology, 18*(4), 752–761. doi: http://dx. doi.org/10.1111/j.1369-1600.2011.00429.x.

World Health Organization (2018). *Adolescent Mental Health: Fact Sheet*. Retrieved April 8, 2024 from https://www.who.int/news-room/fact-sheets/detail/adolescent-mentalhealth.