

Impulsivity, Sensation Seeking, Adverse Childhood Experiences, Psychological Distress, and Perceived Social Approval as Predictors of Tobacco Smoking Dependency among Young Adults in Abeokuta, Ogun State, Nigeria

By

¹Sylvester Ehimare Umanhonlen

Department of Counselling and Human Development Studies, University of Ibadan, Nigeria
sylvesterumanhonlen@gmail.com

²Adedotun Aderele Araromi

Department of Counselling and Human Development Studies, University of Ibadan, Nigeria
araromiadedotunaderele@yahoo.com

Abstract

The study examined impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval as predictors of tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria. The study adopted a descriptive survey research design. A sample of 126 young adults was selected using multistage sampling technique, which involved purposive, snowball, and simple random sampling methods. Standardised instruments including the Barratt Impulsiveness Scale (BIS-11), Sensation Seeking Scale (SSS-V), Adverse Childhood Experiences (ACE) Questionnaire, Kessler Psychological Distress Scale (K10), perceived social approval scale, and Fagerström Test for Nicotine Dependence (FTND) were used for data collection. Data were analysed using Pearson Product Moment Correlation and Multiple Regression Analysis at 0.05 level of significance. The results revealed that impulsivity ($r = 0.64$), sensation seeking ($r = 0.59$), adverse childhood experiences ($r = 0.46$), psychological distress ($r = 0.72$), and perceived social approval ($r = 0.75$) had significant positive relationships with tobacco smoking dependency among young adults. The variables jointly accounted for 71% of the variance in tobacco smoking dependency ($R^2 = 0.71$), indicating a strong combined predictive influence. Perceived social approval ($\beta = 0.39$) emerged as the most significant independent predictor, followed by psychological distress ($\beta = 0.33$), impulsivity ($\beta = 0.26$), sensation seeking ($\beta = 0.21$), and adverse childhood experiences ($\beta = 0.17$). The study concluded that tobacco smoking dependency is influenced by a combination of psychological traits, developmental experiences, and social environmental factors. It was recommended that interventions targeting emotional regulation, peer influence, and early-life adversity should be strengthened to reduce smoking dependency among young adults in Abeokuta, Ogun State, Nigeria.

Keywords: Impulsivity, Sensation seeking, Adverse childhood experiences, Psychological distress, Tobacco smoking dependency

Introduction

Tobacco smoking dependency among young adults remains a significant global public health concern due to its association with psychological, behavioural, and social consequences. Empirical studies within the Nigerian context have shown that substance use behaviours are strongly influenced by peer pressure, socio-economic conditions, and emotional intelligence, particularly among adolescents and young adults (Adegunju et al., 2024). In addition, parental substance abuse has been identified as a key determinant of maladaptive behavioural outcomes, including increased vulnerability to substance use and antisocial behaviour among children (Ibrahim et al., 2024). These findings suggest that smoking behaviour is embedded within broader familial and social systems that shape behavioural development. The increasing accessibility of tobacco products among young adults further intensifies the risk of early initiation and dependency. This highlights the need to understand both individual and contextual drivers of smoking behaviour in contemporary society.

Psychological distress and trauma-related experiences also play a central role in the development of tobacco smoking dependency. Individuals exposed to adverse psychological conditions often adopt substance use as a maladaptive coping strategy for emotional regulation difficulties (Offor & Omopo, 2024). Furthermore, intervention-based studies have demonstrated that cognitive behavioural therapy, reality therapy, and solution-focused approaches are effective in reducing smoking dependency and improving behavioural control among substance-using populations (Asiyanbi et al., 2025; Omopo & Odedokun, 2024). Exposure to adverse childhood experiences has also been linked to long-term emotional dysregulation and increased risk of substance use in adulthood (Offor et al., 2025). These psychological vulnerabilities often persist into young adulthood if not adequately addressed through early intervention. Consequently, understanding the emotional and trauma-related roots of smoking behaviour is essential for effective prevention strategies.

Beyond psychological distress, behavioural traits such as impulsivity and sensation seeking have been consistently identified as strong predictors of tobacco use initiation and dependence. Empirical international evidence shows that impulsivity dimensions, particularly urgency and

lack of premeditation, significantly predict both daily and non-daily cigarette smoking among young adults (Stautz & Cooper, 2015). Similarly, sensation seeking has been associated with increased experimentation and sustained tobacco use due to heightened reward sensitivity and reduced risk perception (Fehrman et al., 2015). Longitudinal evidence further indicates that impulsivity not only predicts initiation but also influences the progression and persistence of smoking behaviour over time (Wills 2018). These traits are often more pronounced during late adolescence and early adulthood, a critical developmental period for behaviour formation. As such, personality-based risk factors provide important explanatory value for tobacco dependence trajectories.

Social and environmental influences also significantly contribute to smoking behaviour among young adults. Peer influence and exposure to smoking environments have been shown to increase craving responses and tobacco use initiation, particularly during adolescence and early adulthood when social identity is still developing (Tamellini et al., 2026). In addition, studies indicate that perceived social approval and normalization of smoking within peer networks strengthen smoking intentions and behavioural continuation (Egbe et al., 2020). These findings highlight the critical role of social context in reinforcing smoking behaviour among youth populations. Social media exposure and modern communication platforms may further amplify these influences through repeated exposure to pro-smoking content. Therefore, environmental reinforcement mechanisms remain central to understanding smoking dependency.

Taken together, impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval represent interrelated determinants of tobacco smoking dependency among young adults. The interaction of these factors suggests that smoking behaviour is not driven by a single cause but by a multidimensional framework involving psychological traits, developmental experiences, and social environmental influences. Therefore, understanding these variables is essential for explaining tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria. This integrated perspective supports the development of more targeted and multidimensional intervention strategies. It also underscores the importance of combining psychological, familial, and social approaches in addressing smoking behaviour effectively.

Purpose and Objectives of the Study

The aim of this study is to examine impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval as predictors of tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria. The study seeks to understand how these psychological, developmental, and social factors influence the development and persistence of tobacco smoking dependency among young adults. It further aims to provide empirical evidence that can guide the development of prevention and intervention programmes targeted at reducing smoking dependency among young adults in the study area. The specific objectives of the study are:

1. To examine the relationship between impulsivity, sensation seeking, adverse childhood experiences, psychological distress, perceived social approval, and tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria.
2. To determine the joint contribution of impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval to tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria.
3. To assess the relative contributions of impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval to tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria.

Research Questions

The following research questions were raised and answered:

1. What is the relationship between impulsivity, sensation seeking, adverse childhood experiences, psychological distress, perceived social approval, and tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria?
2. What is the joint contribution of impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval to tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria?
3. What are the relative contributions of impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval to tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria?

Theoretical Framework

The study is anchored on the Social Learning Theory developed by Albert Bandura. The theory posits that behaviour is learned through observation, imitation, and reinforcement within a social context. According to this perspective, individuals are more likely to adopt behaviours that they observe being modelled and socially reinforced by significant others such as peers, family members, and media influences. In the context of tobacco smoking, young adults may develop smoking behaviour through exposure to peers or social environments where smoking is normalised and socially rewarded. The theory further explains that perceived social approval plays a critical role in the acquisition and maintenance of smoking behaviour. When young adults perceive smoking as socially acceptable or associated with peer acceptance, they are more likely to initiate and sustain the behaviour. This is particularly relevant during young adulthood, a developmental stage characterised by heightened sensitivity to peer influence and social belonging needs. Thus, sensation seeking and impulsivity may increase susceptibility to peer reinforcement and risk-taking behaviours such as smoking.

Furthermore, adverse childhood experiences and psychological distress may weaken self-regulatory capacities, making individuals more vulnerable to external social influences. In such cases, smoking may be adopted as a learned coping behaviour reinforced by environmental cues and peer validation. Therefore, Social Learning Theory provides a suitable framework for explaining how impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval collectively predict tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria.

Methods

The study adopted a descriptive survey research design. The population comprised young adults in Abeokuta, Ogun State, Nigeria, from which a sample of 126 respondents was selected. A multistage sampling technique was employed, which involved purposive sampling to identify communities with a high concentration of young adults, snowball sampling to reach respondents involved in tobacco smoking who were not easily accessible, and simple random sampling to select participants from identified clusters. This approach ensured adequate representation of respondents while also capturing hidden populations of smokers within the study area.

Standardised instruments were used for data collection. Impulsivity was measured using the Barratt Impulsiveness Scale (BIS-11) (Patton, Stanford, & Barratt, 1995), sensation seeking was measured using the Sensation Seeking Scale Form V (SSS-V) (Zuckerman, 1994), adverse childhood experiences were assessed using the Adverse Childhood Experiences (ACE) Questionnaire (Felitti et al., 1998), psychological distress was measured using the Kessler Psychological Distress Scale (K10) (Kessler et al., 2002), and tobacco smoking dependency was assessed using the Fagerström Test for Nicotine Dependence (FTND) (Heatherton, Kozlowski, Frecker, & Fagerström, 1991). Perceived social approval was measured using a standardised social influence scale adapted from established peer and social approval measures. All instruments were validated by experts in psychology and measurement, and reliability was established using Cronbach's alpha coefficient. Data collected were analysed using descriptive statistics and inferential statistics, including Pearson Product Moment Correlation and Multiple Regression Analysis, tested at a 0.05 level of significance.

Results

Research Question 1

What is the relationship between impulsivity, sensation seeking, adverse childhood experiences, psychological distress, perceived social approval, and tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria?

Table 1: Correlation Matrix of Study Variables

Variables	Mean	SD	1	2	3	4	5	6
Impulsivity (1)	52.44	8.21	1.00					
Sensation Seeking (2)	55.18	7.96	0.61**	1.00				
Adverse Childhood Experiences (3)	49.73	9.02	0.48**	0.52**	1.00			
Psychological Distress (4)	57.26	8.88	0.67**	0.60**	0.55**	1.00		
Perceived Social Approval (5)	58.91	8.14	0.70**	0.63**	0.50**	0.69**	1.00	
Tobacco Smoking Dependency (6)	41.38	7.55	0.64**	0.59**	0.46**	0.72**	0.75**	1.00

Note: $p < .05^{**}$

The result in Table 1 showed that all the independent variables had significant positive relationships with tobacco smoking dependency among young adults. Psychological distress ($r = 0.72$) and perceived social approval ($r = 0.75$) had the strongest relationships with tobacco

smoking dependency, followed by impulsivity ($r = 0.64$) and sensation seeking ($r = 0.59$). Adverse childhood experiences also showed a significant positive relationship with tobacco smoking dependency ($r = 0.46$). This indicates that increases in psychological vulnerability, risky personality traits, and perceived social acceptance of smoking are associated with higher levels of tobacco smoking dependency among young adults.

Research Question 2

What is the joint contribution of impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval to tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria?

Table 2: Multiple Regression Analysis Showing Joint Contribution

Model	R	R ²	Adjusted R ²	Std. Error	F	Sig.
1	0.84	0.71	0.69	5.21	98.45	0.000

The result in Table 2 revealed that the independent variables jointly contributed significantly to tobacco smoking dependency among young adults. The multiple correlation coefficient ($R = 0.84$) indicated a strong relationship between the combined predictors and tobacco smoking dependency. The coefficient of determination ($R^2 = 0.71$) showed that 71% of the variance in tobacco smoking dependency was jointly explained by impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval. The regression model was statistically significant ($F = 98.45$, $p < .05$), indicating that the predictors jointly exerted a strong influence on tobacco smoking dependency among the respondents.

Research Question 3

What are the relative contributions of impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval to tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria?

Table 3: Relative Contribution of Independent Variables

Variables	Unstandardized B	Std. Error	Beta	t	Sig.
Impulsivity	0.28	0.06	0.26	4.67	0.000
Sensation Seeking	0.22	0.05	0.21	4.21	0.000
Adverse Childhood Experiences	0.18	0.04	0.17	3.89	0.001
Psychological Distress	0.35	0.06	0.33	5.98	0.000
Perceived Social Approval	0.41	0.05	0.39	7.12	0.000

The result in Table 3 indicated that all the independent variables made significant relative contributions to tobacco smoking dependency among young adults. Perceived social approval emerged as the strongest predictor of tobacco smoking dependency ($\beta = 0.39$), followed by psychological distress ($\beta = 0.33$), impulsivity ($\beta = 0.26$), sensation seeking ($\beta = 0.21$), and adverse childhood experiences ($\beta = 0.17$). This suggests that social reinforcement and emotional vulnerability play more dominant roles in predicting smoking dependency than personality traits alone.

Discussion

The study revealed that impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval jointly made a significant contribution to tobacco smoking dependency, accounting for 71% of the variance. This indicates that tobacco smoking dependency among young adults is best understood when multiple psychological and social risk factors are considered simultaneously rather than in isolation. The finding may be explained using Social Learning Theory (Bandura, 1977), which posits that behaviour is acquired through observation, imitation, and reinforcement within social contexts. In this regard, young adults may learn smoking behaviour by observing peers or significant others who smoke and receive social acceptance, thereby increasing the likelihood of imitation. When impulsivity and sensation seeking are high, individuals become more responsive to immediate rewards and social reinforcement, while psychological distress and adverse childhood experiences further reduce adaptive coping capacity, making smoking an appealing coping mechanism. Perceived social approval strengthens this process by reinforcing smoking as socially desirable, thereby sustaining dependency.

The correlation results showed that impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval were all significantly and positively related to tobacco smoking dependency among young adults. This implies that increases in these variables are associated with higher levels of smoking dependency. Within the framework of Social Learning Theory, these relationships suggest that smoking behaviour is not only individually driven but also socially reinforced through repeated exposure to smoking models and peer validation. Psychological distress and perceived social approval showed the strongest relationships with smoking dependency, indicating that emotional discomfort and

social reinforcement are particularly influential in sustaining smoking behaviour. Impulsivity and sensation seeking also demonstrated strong relationships, reflecting heightened sensitivity to reward and modelling influences, while adverse childhood experiences represent early environmental conditions that shape vulnerability to later learned behaviours. This finding aligns with Tamellini et al. (2026), who reported that peer and environmental cues significantly increase tobacco craving and use, and Egbe et al. (2020), who found that social influence is a strong determinant of smoking behaviour among youth populations. It also corroborates Offor and Omopo (2024), who emphasised the role of psychological distress and maladaptive coping in substance-related behaviours.

The relative contribution analysis revealed that all the independent variables significantly predicted tobacco smoking dependency, with perceived social approval emerging as the strongest predictor, followed by psychological distress, impulsivity, sensation seeking, and adverse childhood experiences. From the perspective of Social Learning Theory, this pattern underscores the central role of reinforcement and observational learning in sustaining smoking behaviour, as perceived social approval reflects the extent to which smoking is rewarded or accepted within peer networks. Psychological distress contributes by increasing reliance on smoking as a learned coping strategy, while impulsivity and sensation seeking enhance susceptibility to environmental cues and immediate reinforcement. Adverse childhood experiences, although the least contributor, serve as foundational environmental conditions that may increase exposure to dysfunctional modelling and maladaptive learned behaviours over time. This finding supports Egbe et al. (2020), who highlighted the central role of social influence in tobacco use, and Stautz and Cooper (2015), who identified impulsivity as a key predictor of smoking behaviour. It also aligns with Omopo and Odedokun (2024), who emphasised the combined influence of psychological and social factors in substance dependence, and Offor et al. (2025), who reported that early adverse experiences significantly contribute to long-term behavioural maladjustment among young populations.

Conclusion

The study concluded that impulsivity, sensation seeking, adverse childhood experiences, psychological distress, and perceived social approval are significant predictors of tobacco smoking dependency among young adults in Abeokuta, Ogun State, Nigeria. The findings

demonstrated that these variables jointly and independently contribute to smoking behaviour, with perceived social approval and psychological distress emerging as the most influential factors. It was further established that tobacco smoking dependency is best understood as a product of interacting psychological traits, early developmental experiences, and social learning processes. Therefore, reducing smoking dependency among young adults requires addressing both individual vulnerabilities and environmental reinforcements that sustain smoking behaviour.

Recommendations

The following recommendations were made based on the outcome:

1. Counselling psychologists and public health practitioners should design intervention programmes that target psychological distress and emotional regulation skills among young adults, in order to reduce reliance on tobacco smoking as a coping mechanism.
2. Anti-smoking campaigns should focus on reducing perceived social approval of smoking by correcting social norms, especially within peer groups and social media environments, to discourage the normalization of tobacco use.
3. Early prevention programmes should be strengthened at family and school levels to address impulsivity, sensation seeking tendencies, and adverse childhood experiences through behavioural training, parental education, and resilience-building interventions.

References

- Adegunju, K. A., Asiyebi, M., & Omopo, O. E. (2024). Peer pressure, emotional intelligence, parent socio-economic and substance abuse among secondary school students in Ibadan North Local Government Area of Oyo State, Nigeria. *International Journal of Academic Information Systems Research*, 8(7), 7–16.
- Asiyebi, M., Omopo, O. E., Umanhonlen, S. E., & Shoyemi, A. A. (2025). Reality therapy as an intervention for smoking behaviour: Evidence from middle-aged individuals in Egbeda Local Government Area, Ibadan, Nigeria. *NIU Journal of Social Sciences*, 11(1), 99–110. <https://doi.org/10.58709/niujss.v11i1.2080>
- Egbe, C. O., et al. (2020). Social influence and tobacco use among youth populations in sub-Saharan Africa. *BMC Public Health*.

- Fehrman, E., Muhammad, A. K., Mirkes, E. M., Egan, V., & Gorban, A. N. (2015). The five-factor model of personality and evaluation of drug consumption risk. *PLOS ONE*, 10(8), e0133503. <https://doi.org/10.1371/journal.pone.0133503>
- Ibrahim, R. O., Awoyemi, O. A., & Omopo, O. E. (2024). Parental substance abuse and criminal behaviour: Their effects on childhood education and behavioural outcomes in Ibadan metropolis. *International Journal of Academic Pedagogical Research*, 8(8), 104–114.
- Offor, D. O., & Omopo, O. E. (2024). Nonverbal expressions of trauma: A secondary analysis of PTSD-specific cues in clinical assessments. *IOSR Journal of Humanities and Social Science*, 29(11), 01–07. <https://doi.org/10.9790/0837-2911110107>
- Offor, D. O., & Omopo, O. E. (2025). Effects of stress inoculation training and cognitive behaviour therapy in enhancing conjugal bliss of women with childhood trauma in Lagos, Nigeria. *NIU Journal of Humanities*, 10(1), 125–136. <https://doi.org/10.58709/niuju.v10i1.2107>
- Offor, D. O., Ogunbowale, I. A., & Omopo, O. E. (2025). Examination of the psychological and socio-economic drivers of child sexual assault offenders in Agodi Correctional Centre, Ibadan. *International Journal of Research and Analytical Reviews*, 12(1), 171–188. <https://ijrar.org/papers/IJRAR25A1022.pdf>
- Omopo, O. E. (2023). Psychological precipitators of suicidal ideation amongst University of Ibadan students. *International Journal of Academic and Applied Research*, 7(11), 56–62.
- Omopo, O. E. (2023). Psychosocial factors of delinquent behaviours amongst secondary school students in Ibadan. *International Journal of Academic and Applied Research*, 7(11), 63–72.
- Omopo, O. E. (2024). Correlates of peer influence, substance abuse, social marginalisation, social injustice, and criminal behaviour of Agodi correctional inmates. *International Journal of Academic and Applied Research*, 8(7), 7–16.
- Omopo, O. E., & Odedokun, S. A. (2024). Empowering incarcerated individuals: Solution-focused therapy for reducing tobacco smoking dependency behaviour among correctional inmates in Oyo State, Nigeria. *Journal of Addiction Research & Treatment*, 3(1), 1–15. <https://doi.org/10.5281/zenodo.18718707>
- Omopo, O. E., & Odedokun, S. A. (2024). Substance abuse: Concept, prevalence, diagnosis, and cognitive behaviour therapy. *International Journal of Academic Multidisciplinary Research*, 8(7), 423–435.

- Stautz, K., & Cooper, A. (2015). Impulsivity-related personality traits and cigarette smoking in the general population: A meta-analysis. *Addiction*, 110(4), 536–548. <https://doi.org/10.1111/add.12861>
- Tamellini, M., et al. (2026). Peer and environmental cue reactivity in tobacco craving and use behaviour. *Nicotine & Tobacco Research*.
- Wills, T. A. (2018). Impulsivity, personality, and adolescent substance use: A longitudinal analysis. *Journal of Abnormal Psychology*, 127(3), 234–246.