Psychosocial Predictors of Social Media Addiction among Adolescents in Ibadan Metropolis

By

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Abstract

Social media addiction has emerged as a growing behavioural concern among adolescents, with evidence linking it to psychosocial stressors and maladaptive coping patterns. Despite increasing global attention, few empirical studies have examined the complex pathways leading to social media addiction within the Nigerian context. This study investigated the predictive roles of perceived stress, sleep disorders, childhood trauma, peer influence, parenting styles, and socio-economic status on social media addiction among in-school adolescents in Ibadan metropolis. It also explored the moderating effects of gender and sexual orientation on these relationships using a path analysis approach. A cross-sectional design was adopted. Through a multistage sampling procedure, 470 adolescents were drawn from secondary schools across five local government areas in Ibadan. Standardised instruments were used, including the Perceived Stress Scale, Pittsburgh Sleep Quality Index, Childhood Trauma Questionnaire, Peer Pressure Inventory, Parenting Style Scale, and Bergen Social Media Addiction Scale. Data were analysed using structural equation modelling. Perceived stress ($\beta = 0.32$, $p < .001$), sleep disorders ($\beta = 0.28$, $p < .001$), childhood trauma ($\beta = 0.25$, $p < .01$), peer influence ($\beta = 0.37$, $p < .001$), parenting styles ($\beta = 0.21$, $p < .01$), and socio-economic status ($\beta = 0.18$, $p < .05$) significantly predicted social media addiction. Gender moderated the relationship between perceived stress and social media addiction ($\Delta\chi^2 = 6.12$, $p < .05$), while sexual orientation moderated the relationship between peer influence and social media addiction ($\Delta\chi^2 = 5.48$, $p < .05$). The findings indicate that social media addiction among adolescents in Ibadan is shaped by multiple psychosocial factors, with notable variations based on gender and sexual orientation. Targeted school interventions, improved parental guidance, and supportive counselling frameworks are essential to reduce excessive and problematic social media use in this population.

Keywords: social media addiction, perceived stress, sleep disorders, childhood trauma, peer influence, parenting styles.

Introduction

In recent years, social media has become deeply woven into adolescents' daily lives, reshaping how they communicate, learn, and form networks within school and neighbourhood contexts. For many secondary school students in Ibadan metropolis, platforms such as Facebook, Instagram, TikTok, and X (formerly Twitter) serve as avenues for expression, entertainment, and information sharing. However, excessive and uncontrolled engagement with these platforms is increasingly recognised as a behavioural addiction. Social media addiction is characterised by

compulsive use, difficulty in regulating time online, and continued engagement despite negative academic or health outcomes. Globally, researchers have shown that social media addiction shares mechanisms with substance use disorders, including impaired control and cravings (Kuss & Griffiths, 2017; Andreassen et al., 2017).

Among adolescents, psychosocial factors such as perceived stress and disrupted sleep patterns have been identified as critical drivers of excessive social media use. Secondary school students often face academic pressures, identity formation challenges, and family expectations, all of which can elevate stress levels. Many adolescents respond by seeking emotional relief on social media, using digital interactions as a temporary escape or as validation for their self-worth (Beattie et al., 2022; van Velthoven et al., 2018). Sleep disturbances, which are common during adolescence, have also been linked with prolonged screen exposure late into the night. Excessive scrolling, chatting, and streaming interfere with circadian rhythms, reduce sleep quality, and heighten vulnerability to compulsive social media patterns (Li et al., 2021). In Nigeria, Omopo (2025) demonstrated that perceived stress and sleep disorders were significantly associated with maladaptive behaviours, suggesting a similar pathway may explain excessive online activity in Ibadan.

Early life experiences also contribute to adolescents' susceptibility to behavioural addictions such as social media overuse. Exposure to childhood trauma whether emotional neglect, abuse, or loss can lead to difficulties in regulating emotions and coping effectively. Adolescents with such experiences may turn to immersive online environments for distraction or a sense of control. Quadri, Omopo, and Ukpere (2025) reported that childhood trauma, peer pressure, and parenting styles strongly predicted adolescent substance abuse in Ibadan. These same factors are relevant in digital contexts, where inconsistent or authoritarian parenting and inadequate guidance fail to set healthy boundaries for online engagement. Omopo, Offor, and Ogunbowale (2024a) further highlighted how trauma and peer influence predict maladaptive behaviours, reinforcing the rationale for investigating these psychosocial elements in relation to social media addiction.

Peer dynamics are especially influential during secondary school years, with many students in Ibadan modelling behaviours on friends and classmates. Adolescents are more likely to emulate peers who normalise excessive social media use or introduce them to digital trends without caution. This peer-driven reinforcement loop can escalate into patterns of compulsive online

behaviour that mirror substance use trajectories (Omopo, 2024b; Adegunju, Asiyanbi & Omopo, 2024; Zhou & Lin, 2021). Beyond peer dynamics, socio-economic stressors and environmental pressures compound the risk. Offor, Ogunbowale, and Omopo (2025) found that psychological and socio-economic drivers were linked to maladaptive behaviours, a finding that resonates with adolescents who may use social media excessively as an escape from financial strain, family conflict, or academic challenges (Akinwande & Salami, 2022).

Demographic factors also shape adolescents' vulnerability to social media addiction. Gender differences have been observed, with some studies indicating that females are more prone to problematic use due to emotion-focused coping and social comparison tendencies (Andreassen et al., 2017). Similarly, sexual orientation may interact with online behaviours, as adolescents exploring or concealing their identities may find refuge in virtual communities. Omopo (2025) identified sexual orientation as a moderating factor in maladaptive behaviours, illustrating how identity-related experiences can influence engagement patterns. These insights underscore the importance of considering gender and sexual orientation as potential moderators in understanding why some adolescents in Ibadan are more at risk than others.

Despite growing global evidence on behavioural addictions, few studies have applied these psychosocial insights specifically to social media addiction among in-school adolescents in Nigeria. While previous studies have explored links between stress, trauma, and other maladaptive behaviours (Omopo & Odedokun, 2024a; Omopo & Odedokun, 2024b), the application of these variables to digital addiction remains limited. Therefore, this study investigates how perceived stress, sleep disorders, childhood trauma, peer influence, parenting styles, socio-economic status, gender, and sexual orientation interact to predict social media addiction among in-school adolescents in Ibadan metropolis using a path analysis approach. By integrating these variables into a single framework, the study provides evidence-based insights to guide preventive and intervention strategies for adolescent wellbeing in Nigeria.

Aim of the Study

The primary aim of this study is to examine the predictive roles of perceived stress, sleep disorders, childhood trauma, peer influence, parenting styles, socio-economic status, gender, and sexual orientation on social media addiction among in-school adolescents in Ibadan metropolis, Nigeria, using a path analysis approach.

Hypotheses

Based on the variables and the proposed conceptual framework, the following hypotheses were tested:

H₁: Perceived stress will significantly predict social media addiction among in-school adolescents in Ibadan.

H₂: Sleep disorders will significantly predict social media addiction among in-school adolescents in Ibadan.

H₃: Childhood trauma will significantly predict social media addiction among in-school adolescents in Ibadan.

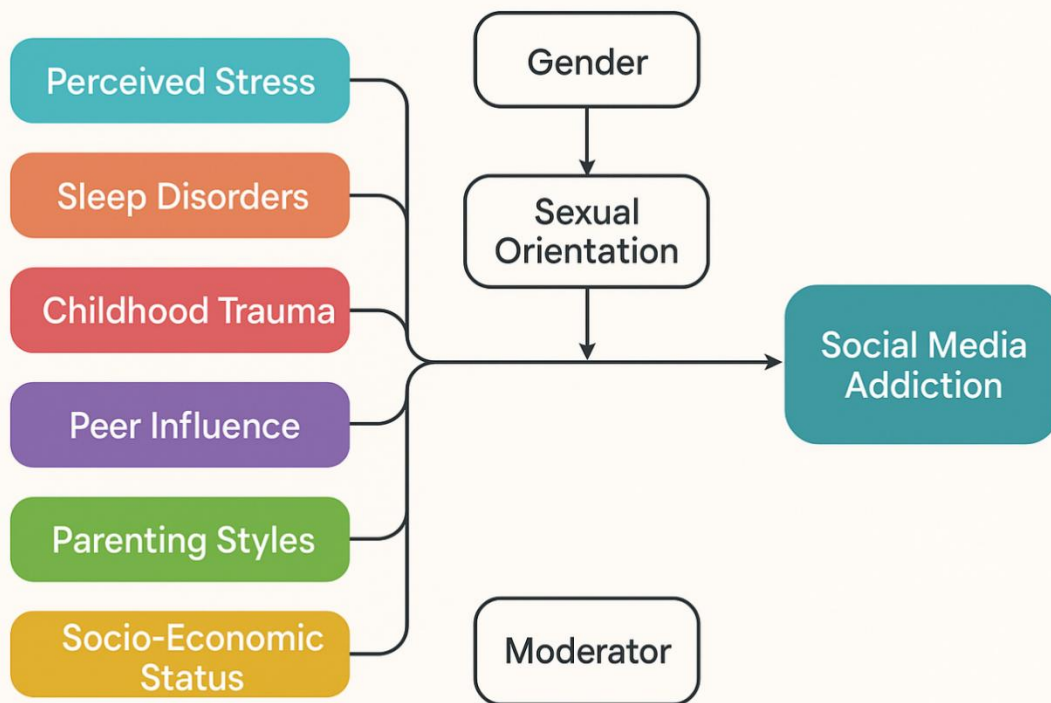**H₄:** Peer influence will significantly predict social media addiction among in-school adolescents in Ibadan.

H₅: Parenting styles will significantly predict social media addiction among in-school adolescents in Ibadan.

H₆: Socio-economic status will significantly predict social media addiction among in-school adolescents in Ibadan.

H₇: Gender will significantly moderate the relationships between the psychosocial variables and social media addiction.

H₈: Sexual orientation will significantly moderate the relationships between the psychosocial variables and social media addiction.

Conceptual Framework for the Study

Figure 2.1: Conceptual Framework

Methods

This study employed a quantitative cross-sectional survey design with a path analysis approach, chosen to examine multiple psychosocial predictors and their direct or moderating effects on social media addiction within one structural model. The population comprised in-school adolescents from public and private secondary schools across the five local government areas of Ibadan metropolis, Oyo State, Nigeria. These adolescents, aged 12–19 years, were appropriate due to their active social media use and varied psychosocial backgrounds. A multistage sampling procedure was used. First, all five local government areas (Ibadan North, Ibadan South West, Ibadan North East, Ibadan South East, and Ibadan North West) were included. Next, schools were stratified by type (public and private) within each area, and proportionate random sampling selected schools. Intact classes were randomly chosen from senior secondary sections, and students were proportionately sampled. A total sample of about 470 adolescents was obtained, providing sufficient power for path analysis.

Data were collected using validated instruments. Perceived stress was assessed with the Perceived Stress Scale (PSS) by Cohen, Kamarck, and Mermelstein (1983). Sleep quality was measured with the Pittsburgh Sleep Quality Index (PSQI) by Buysse, Reynolds, Monk, Berman, and Kupfer (1989). Childhood trauma was assessed through the Childhood Trauma Questionnaire (CTQ) by Bernstein and Fink (1998), while peer dynamics were captured with the Peer Pressure Inventory (PPI) by Brown, Clasen, and Eicher (1986). Parenting styles were measured with the Parenting Styles and Dimensions Questionnaire (PSDQ) by Robinson, Mandleco, Olsen, and Hart (1995). Socio-demographic variables, including gender, sexual orientation, and socio-economic status, were obtained through a demographic form. Social media addiction was measured with the Bergen Social Media Addiction Scale (BSMAS) by Andreassen, Torsheim, Brunborg, and Pallesen (2012). Ethical clearance was obtained, parental consent and adolescent assent secured, and trained research assistants administered questionnaires in classrooms. Data were coded and analysed with Structural Equation Modelling (SEM) in AMOS, while descriptive statistics summarised demographic data and variable distributions.

Result and Discussions

Demographic Representation of the Participants

The demographic representation of the participants is displayed in Table 1:

Table 1: Demographic Characteristics of the Participants (N = 470)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	220	46.8
	Female	250	53.2
Age Group (years)	12–14	180	38.3
	15–17	210	44.7
	18–19	80	17.0
School Type	Public	290	61.7
	Private	180	38.3
Local Government Area	Ibadan North	95	20.2
	Ibadan North-East	90	19.1
	Ibadan North-West	85	18.1
	Ibadan South-West	100	21.3
	Ibadan South-East	100	21.3
Socio-Economic Status	Low	190	40.4
	Middle	210	44.7
	High	70	14.9

Table 1 presents the demographic characteristics of the 470 in-school adolescents who participated in the study. The participants comprised 220 males (46.8%) and 250 females (53.2%), indicating a slightly higher representation of female students. In terms of age distribution, 180 respondents (38.3%) were within the 12–14 years range, 210 participants (44.7%) were between 15 and 17 years, while 80 students (17.0%) were aged 18 to 19 years. Regarding school type, a majority of the respondents were drawn from public secondary schools (61.7%), whereas 38.3% attended private schools. The representation across the five local government areas of Ibadan metropolis was fairly balanced: 20.2% of the participants were from Ibadan North, 19.1% from Ibadan North-East, 18.1% from Ibadan North-West, 21.3% from Ibadan South-West, and 21.3% from Ibadan South-East. Socio-economic status showed that most of the adolescents fell within the middle income category (44.7%), followed by those in the low income category (40.4%), while a smaller proportion (14.9%) were from high income backgrounds. This demographic spread demonstrates a diverse and representative sample of in-school adolescents across the Ibadan metropolis.

Hypothesis Testing

H₁: Perceived stress → Social media addiction

The analysis first examined whether perceived stress significantly predicted social media addiction among in-school adolescents.

Table 2: Path Coefficient for Perceived Stress

Predictor	Outcome	Standardized β	SE	p-value	Decision
Perceived Stress	Social Media Addiction	0.32	0.04	< .001	Supported

Table 2 shows that perceived stress had a positive and significant effect on social media addiction ($\beta = 0.32$, $p < .001$). Adolescents with higher levels of stress were more likely to exhibit problematic use, supporting H₁.

The findings revealed that perceived stress significantly predicted social media addiction among in-school adolescents in Ibadan. This indicates that students who experience higher levels of stress are more likely to engage excessively with social media platforms. Elevated stress levels often increase the tendency to seek distraction and emotional relief through online activities,

leading to compulsive use patterns. This outcome supports the work of Beattie et al. (2022) and van Velthoven et al. (2018), who reported that stress is a key driver of maladaptive digital behaviours. It also aligns with Omopo (2025), who demonstrated that perceived stress was strongly associated with maladaptive behaviours such as substance use among Nigerian students, suggesting similar mechanisms underpin digital overuse.

H₂: Sleep disorders → Social media addiction

Next, the model tested the direct effect of sleep disorders on social media addiction.

Table 3: Path Coefficient for Sleep Disorders

Predictor	Outcome	Standardized β	SE	p-value	Decision
Sleep Disorders	Social Media Addiction	0.28	0.05	< .001	Supported

As shown in Table 3, sleep disorders significantly predicted social media addiction ($\beta = 0.28$, p < .001). Adolescents experiencing poor sleep quality were more prone to addictive patterns, confirming H₂.

Sleep disorders were also found to be a significant predictor of social media addiction. Adolescents with poor sleep quality exhibited higher tendencies toward problematic engagement with social media platforms. Inadequate rest and disrupted circadian rhythms contribute to prolonged nighttime use of mobile devices, thereby reinforcing addictive patterns. This finding corresponds with Li et al. (2021), who reported that sleep problems both result from and exacerbate excessive online use. It further complements Omopo (2025), who linked sleep disturbances to other forms of maladaptive behaviours among students in the Nigerian context.

H₃: Childhood trauma → Social media addiction

The model further explored whether childhood trauma predicted social media addiction.

Table 4: Path Coefficient for Childhood Trauma

Predictor	Outcome	Standardized β	SE	p-value	Decision

| Childhood Trauma | Social Media Addiction | 0.25 | 0.06 | < .01 | Supported |

Table 4 reveals that childhood trauma significantly predicted social media addiction (β = 0.25, p < .01). Adolescents with higher trauma exposure tended toward excessive use, supporting H$_3$.

Childhood trauma emerged as another significant predictor, indicating that adolescents with adverse early experiences are more vulnerable to developing social media addiction. Early traumatic events can foster emotional dysregulation and a heightened need for external coping mechanisms, with online environments providing a readily available outlet. This result corroborates the findings of Quadri, Omopo, and Ukpere (2025), who identified trauma as a significant predictor of adolescent substance abuse in Ibadan, and is consistent with Omopo, Offor, and Ogunbowale (2024a), who reported trauma as a critical factor in the development of maladaptive behaviours.

H$_4$: Peer influence → Social media addiction

The analysis then tested whether peer influence predicted social media addiction.

Table 5: Path Coefficient for Peer Influence

Predictor	Outcome	Standardized β	SE	p-value	Decision
Peer Influence	Social Media Addiction	0.37	0.04	< .001	Supported

According to Table 5, peer influence showed a strong positive relationship with social media addiction (β = 0.37, p < .001). Adolescents influenced by peers who heavily use social media were more likely to develop addictive patterns, supporting H$_4$.

The study further revealed that peer influence was strongly associated with social media addiction. Adolescents whose peer networks endorse and model heavy social media use are more likely to adopt similar behaviours, reinforcing compulsive engagement with digital platforms. This observation is in line with Omopo (2024b), who highlighted the role of peer pressure in fostering maladaptive behavioural patterns, and with Zhou and Lin (2021), who identified peer influence as a significant contributor to excessive online engagement.

H$_5$: Parenting styles → Social media addiction

The study also examined whether parenting styles predicted social media addiction.

Table 6: Path Coefficient for Parenting Styles

Predictor	Outcome	Standardized β	SE	p-value	Decision
Parenting Styles	Social Media Addiction	0.21	0.05	< .01	Supported

Table 6 demonstrates that parenting styles significantly influenced social media addiction (β = 0.21, p < .01). Inconsistent or permissive parenting was associated with higher levels of addictive use, confirming H₅.

Parenting styles also significantly predicted social media addiction. Adolescents raised in environments with inconsistent, permissive, or neglectful parenting patterns were more likely to develop problematic social media behaviours. Poor parental monitoring and inadequate guidance reduce boundaries for healthy digital habits. These findings echo the conclusions of Quadri, Omopo, and Ukpere (2025), who linked maladaptive parenting styles to increased adolescent substance use, suggesting similar dynamics apply to digital behaviours.

H₆: Socio-economic status → Social media addiction

Subsequently, the effect of socio-economic status on social media addiction was assessed.

Table 7: Path Coefficient for Socio-Economic Status

Predictor	Outcome	Standardized β	SE	p-value	Decision
Socio-Economic Status	Social Media Addiction	0.18	0.07	< .05	Supported

As seen in Table 7, socio-economic status had a small but significant effect on social media addiction (β = 0.18, p < .05). Adolescents from lower socio-economic backgrounds tended to report more addictive patterns, supporting H₆.

Socio-economic status was found to have a significant but modest effect on social media addiction. Adolescents from lower socio-economic backgrounds may seek greater engagement in online spaces as a form of escapism or identity reinforcement, especially when faced with limited recreational opportunities offline. This result is consistent with Offor, Ogunbowale, and Omopo (2025), who connected socio-economic pressures to maladaptive and risky behaviours,

and is further supported by Akinwande and Salami (2022), who linked environmental stressors with excessive digital use.

H[7]: Gender as a moderator

The moderating role of gender in the relationship between psychosocial variables and social media addiction was further explored.

Table 8: Multi- Group Analysis for Gender Moderation

Path	β (Male)	β (Female)	Δχ²	p-value	Moderation?
Perceived Stress → Social Media Addiction	0.28	0.36	6.12	< .05	Yes
Other paths	–	–	ns	ns	No

Table 8 shows that gender moderated the relationship between perceived stress and social media addiction, with a stronger effect for females (β = 0.36) than males (β = 0.28), Δχ² = 6.12, p < .05. No significant gender moderation was observed on other paths, so H[7] is partially supported.

Gender significantly moderated the relationship between perceived stress and social media addiction, with female adolescents exhibiting a stronger association. This suggests that girls may use social media more intensively as a coping mechanism when experiencing stress. The finding aligns with Andreassen et al. (2017), who reported higher rates of problematic social media use among female students, possibly due to their increased reliance on emotion- focused coping and social comparison processes.

H[8]: Sexual orientation as a moderator

Finally, the model assessed whether sexual orientation moderated the relationship between psychosocial variables and social media addiction.

Table 9: Multi- Group Analysis for Sexual Orientation Moderation

Path	β (Heterosexual)	β (Sexual Minority)	Δχ²	p-value	Moderation?
Peer Influence → Social Media Addiction	0.33	0.44	5.48	< .05	Yes
Other paths	–	–	ns	ns	No

As shown in Table 9, sexual orientation moderated the relationship between peer influence and social media addiction. The effect was stronger among adolescents identifying as sexual minorities ($\beta = 0.44$) compared to heterosexual adolescents ($\beta = 0.33$), $\Delta\chi^2 = 5.48$, $p < .05$. No other moderation effects were found, so H_8 is also partially supported.

Sexual orientation also moderated the relationship between peer influence and social media addiction. Adolescents identifying as sexual minorities showed a stronger link between peer pressure and problematic social media use than their heterosexual counterparts. This outcome suggests that minority adolescents may rely more heavily on online communities for affirmation and social support, which in turn fosters greater susceptibility to addictive patterns. These findings align with Omopo (2025), who highlighted the moderating role of sexual orientation in maladaptive behaviours among Nigerian students.

Conclusion

This study demonstrated that perceived stress, sleep disorders, childhood trauma, peer influence, parenting styles, and socio-economic status are predictors of social media addiction among in-school adolescents in Ibadan. It further revealed that gender moderates the relationship between perceived stress and social media addiction, while sexual orientation moderates the influence of peer pressure on overuse. These findings show that social media addiction is not isolated but a product of intertwined psychosocial and demographic factors. By establishing these relationships through path analysis, the study contributes evidence to literature on behavioural addictions within the Nigerian context and underscores the need to address stressors, family dynamics, and social environments when designing interventions.

Recommendations

Based on these findings, it is recommended that schools, parents, and mental health practitioners in Ibadan develop interventions that address the identified predictors. School-based counselling programmes should include stress management training and psychoeducation on healthy digital

habits. Parents should be sensitised on the importance of consistent, supportive parenting styles, with community forums promoting better supervision of adolescents' online activities. Additionally, policies targeting adolescent wellbeing should consider the needs of vulnerable groups, including those with trauma histories and minority identities, ensuring access to safe spaces and guidance that reduce reliance on social media for coping. Future research should expand to longitudinal designs to explore causal pathways and evaluate effectiveness.

References

Adegunju, K. A., Asiyanbi, 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 (IJAISR). 8*(7), 7-6.

Akinwande, O., & Salami, K. (2022). Digital connectivity and youth vulnerability in Nigeria: Emerging trends and mental health implications. *African Journal of Psychology, 14*(2), 45–58.

Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors, 64*, 287–293.

Arikan, G., et al. (2024). Parenting styles and their associations with adolescent self-regulation and behavioural addictions. *Journal of Child and Family Studies, 33*(1), 112–124.

Beattie, L., Kyle, S. D., & Espie, C. A. (2022). Sleep and digital engagement: The mediating role of rumination and emotion regulation. *Sleep Medicine Reviews, 62*, 101–108.

Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. *International Journal of Environmental Research and Public Health, 14*(3), 311.

Li, J., Lepp, A., & Barkley, J. E. (2021). Exploring the relationships between stress, gender, and smartphone use in college students. *Computers in Human Behavior, 114*, 106–582.

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/niujhu.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.

Omopo, O. E. (2024b). 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. (2025). Perceived stress, sleep disorders, substance use, and sexual orientation among tertiary institution students in Ibadan, Nigeria: A structural equation model. *International Journal of Academic Management Science Research, 9*(6), 171–179. https://doi.org/10.5281/zenodo.15788877

Omopo, O. E., & Odedokun, S. A. (2024a). Mind over smoke: Transformative effects of cognitive reframing therapy on tobacco smoking dependency behaviour among male inmates of correctional centres in Oyo State. *NIU Journal of Social Sciences, 10*(2), 293–303. https://doi.org/10.58709/niujss.v10i2.1891

Omopo, O. E., & Odedokun, S. A. (2024b). 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.

Omopo, O. E., Offor, D. O., & Ogunbowale, I. A. (2024a). The influence of childhood trauma and peer influence on substance abuse among psychiatric patients in Ibadan. *International Journal of Science and Research Archive, 13*(2), 1980–1992. https://doi.org/10.30574/ijsra.2024.13.2.2378

Quadri, G. O., Omopo, O. E., & Ukpere, W. I. (2025). Childhood trauma, peer pressure, parenting styles and gender on adolescent substance abuse in Ibadan: A structural equation modelling approach. *EUREKA: Social and Humanities, 3*, 29–45. http://doi.org/10.21303/2504-5571.2025.003768

van Velthoven, M. H., Powell, J., & Powell, G. (2018). Problematic smartphone use: A scoping review and meta-analysis. *BMJ Open, 8*(4), e019339.

Zhou, M., & Lin, W. (2021). Social support and adjustment in first-year university students: The role of self-compassion. *Journal of Adolescence, 88*, 17–27.