

GAMING ADDICTION, LONELINESS AND RELIGIOSITY AS PREDICTORS OF DISRUPTIVE BEHAVIOUR AMONGST ADOLESCENTS IN NIGERIA

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Abstract

Adolescents represent a cohort of individuals in a phase of youth and ongoing development and are susceptible to a multitude of influences that may precipitate misconduct, underscoring the necessity of discerning and managing the extent of exposure to such influences. Consequently, this current study investigated the interplay among gaming addiction, feelings of isolation, and religious devotion as prognosticators of disruptive conduct within the adolescent population in Nigeria. Participants in the research were 310 adolescent students aged between 11 and 21 years (mean age=16.30, SD=7.07) who were recruited using a method of convenient sampling. The participants completed assessments gauging levels of gaming addiction, loneliness, religiosity, and disruptive behavior. Analysis of the results was carried out using hierarchical multiple regression. The outcomes unveiled that gaming addiction exhibited a positive association with disruptive behavior; conversely, loneliness failed to demonstrate a predictive relationship with disruptive behavior, while religiosity displayed a negative predictive capacity for disruptive behavior. These findings underscore the significance of tackling gaming addiction issues and fostering religious involvement and instruction among Nigerian adolescents to attenuate the susceptibility to engaging in disruptive conduct.

Keywords: Gaming Addiction; Loneliness; Religiosity; Disruptive Behaviour; Adolescents; Nigeria

Introduction

Adolescence represents a distinctive stage of human development pivotal for establishing the groundwork for forthcoming accomplishments. This transitional phase bridges childhood and adulthood, spanning from 10 to 19 years, characterized by multifaceted transformations in physical, cognitive, and emotional domains (WHO, 2024). Within this teenage range, adolescents actively seek novel encounters, cultivate their self-concepts, and encounter a spectrum of influences, both constructive and detrimental, that mold their conduct, occasionally manifesting in disruptive manners. The manifestation of disruptive behavior disorder during adolescence can inflict substantial distress upon both adolescents and their families, with potential repercussions extending to society at large. Disruptive behavior disorder, as delineated by Tounsi et al. (2023), encompasses behaviors impeding individuals from adhering to planned activities' rhythms and protocols, hindering the customary progression of tasks and necessitating extensive time for rectification, which could otherwise be dedicated to educational endeavors. Studies carried out by Araban et al. (2020) and Bouzid et al. (2025) underscore the enduring adverse impacts of disruptive behavior disorder, encompassing school absenteeism, deficient self-regulation, aggression, substance misuse, anxiety, and impaired interpersonal relationships characterized by conflict or lacking empathy. Adolescents exhibiting disruptive behaviors often grapple with understanding and managing their emotions, rendering them more susceptible to engaging in delinquent and illicit behaviors (Karimy et al., 2018; Alperin et al., 2023). Notably, when disruptive behavior disorder is self-directed rather than externalized, it can significantly impact the individual's well-being, functioning as a maladaptive coping strategy or stress response, offering transient relief while harboring long-term peril (Barowska & Quist, 2021; Wangdi & Rigdel, 2025).

Adolescence represents a distinctive stage in human development and serves as a pivotal period for laying the groundwork for future accomplishments. Spanning from 10 to 19 years of age, this transitional phase from childhood to adulthood is characterized by multifaceted transformations in physical, cognitive, and emotional realms (WHO, 2024). Adolescents in this phase frequently seek novel experiences, forge their identities, and encounter both positive and negative stimuli that can impact their behavior, often manifesting as disruptive tendencies (Adewale & Moyo, 2025). The prevalence of disruptive behaviors stands out as among the most prevalent disorders afflicting adolescents, necessitating the identification of potential predictors of such behaviors in both male and female adolescents to facilitate early detection and to formulate prevention and intervention strategies (Ødegård & Solberg, 2024). Strategies to mitigate disruptive behaviors include probing into underlying etiologies, monitoring behavioral patterns, and discerning the adverse implications of such behaviors (Barnes, 2023). Correspondingly, there exists empirical support linking the susceptibility to disruptive behavior disorders in adolescents to risks associated with internet addiction or gaming addiction (GA) (Esposito et al., 2020). While gaming addiction may offer temporary gratification and solace, its prolonged engagement poses risks to individuals' well-

being (Zhang et al., 2024). The World Health Organization (2024) has officially recognized gaming disorder in the 11th edition of the International Classification of Diseases (ICD-11). The ICD-11 characterizes gaming disorder as a behavioral pattern in which individuals exhibit compromised control over gaming activities, prioritizing gaming over other pursuits, to the extent that it supersedes their interests and daily obligations. The onset of gaming addiction typically occurs during early adolescence (Brand et al., 2024), with affected adolescents resorting to deceit or secrecy regarding their gaming habits, dedicating prolonged hours to gaming activities, experiencing diminished productivity, and placing gaming activities above essential functions like sleep or social interactions (Fan & Zhang, 2023). These behavioral attributes align with the description of disruptive behaviors as delineated by Karimy et al. (2018) and pose detrimental consequences, given Gao et al.'s (2022) revelation that a substantial proportion of young adults (ages 18-24) and adults at large report recent engagement in online gaming activities. Moreover, Fan and Zhang (2023), in their inquiry into the genesis of video game addiction and its ramifications on human life, have unearthed associations between video game addiction and various contributory factors, including parental dynamics and mental health considerations. Stress and depression, as highlighted by Mirza et al. (2025), emerge as closely intertwined with addiction, as they can incite maladaptive coping mechanisms such as excessive gaming.

The susceptibility to developing addiction, including in the context of video gaming, is a well-documented phenomenon that can lead to adverse behavioral patterns and disruptions (Esposito et al., 2020). Adolescents, in particular, have been highlighted as a group that may exhibit characteristics associated with addiction to video games, with research consistently indicating a strong correlation between online gaming addiction and feelings of loneliness (Kaya et al., 2025; Nowland et al., 2017; Snodgrass et al., 2018; Sravanthi et al., 2024). Loneliness, a prevalent emotional state, has been found to be linked with various negative psychological outcomes such as substance abuse, depression, and anxiety, a connection that has been reported even among adults facing mental health challenges (Birken et al., 2023). Mann et al. (2022) explored the potential of loneliness as a catalyst for the onset of new mental health issues in the wider population, revealing a significant association between loneliness and the emergence of such problems. Loneliness is a pervasive phenomenon that can affect individuals across all stages of development, with adolescents being particularly vulnerable (Smith, 2024). The experience of loneliness has been associated with an elevated risk of psychosocial difficulties, including depression, in young people (Smith, 2024). Concurrently, research has identified links between loneliness and various risky and addictive behaviors that can be disruptive in nature (Parker, 2020). Notably, the combination of adolescent loneliness, problematic online gaming, and excessive internet usage has been connected with significant adverse outcomes (Schwart, 2020). Feelings of social inadequacy due to loneliness have been identified as a motivating factor driving individuals to seek inclusion in online communities (Mann et al., 2022). While direct evidence linking adolescent loneliness to disruptive behavior is currently lacking, studies have suggested that adolescents dissatisfied with their offline

relationships may turn to online gaming addiction (Kaya et al., 2024). Given the role of social inadequacy during adolescence in precipitating loneliness, exploration of religion, as a social institution, becomes pertinent.

Religion is defined as a structured system encompassing beliefs, rituals, and symbols aimed at fostering a transcendental connection, whether with a higher power, the divine, or ultimate truth (Sabir et al., 2025). Throughout the evolution of civilization, religions have become institutionalized entities (Eliwa et al., 2023). Terzani and Turzo (2021) characterize religion as a comprehensive concept involving the pursuit of life's meaning, resolution of existential questions, and engagement with the sacred or divine. Recent scientific inquiry has revealed a positive and indirect relationship between spiritual well-being, favorable mental and physical health outcomes, and religious engagement (Saad et al., 2022). However, should the quest for transcendence or life purpose through religious channels veer into maladaptive patterns, adolescents may exhibit disruptive behaviors (Kala & Chaubey, 2024).

Some scholars argue that religion can exert a positive impact on the development of adolescents (Petro et al., 2018). It has been suggested in another study that religious beliefs can significantly shape adolescent behavior and mental well-being (Williams et al., 2019). Religious convictions play a crucial role in instilling values and guiding conduct, emphasizing the significance of familial relationships and parental involvement in the lives of young individuals. By either permitting or prohibiting certain behaviors and substances, religious beliefs can also influence the behavioral patterns of adolescents. Therefore, religion can serve as a source of value, assistance, and motivation, providing individuals with a sense of purpose and meaning (Krok, 2018). Investigations by Li et al. (2018) propose that religious practices may impact the likelihood of adolescents engaging in delinquent behaviors. Moreover, adolescents who exhibit higher levels of competence, self-regulation, psychosocial adjustment, and academic success are more likely to have parents who are actively involved in religious practices (Li et al., 2018), potentially mitigating disruptive behaviors in these youths.

This current study is grounded in the transactional theory and the Social Learning Theory. The transactional theory is rooted in the concept of reciprocity, positing that individuals tend to act disruptively when they perceive a lack of societal rewards for their behaviors. According to the transactional theory, adolescents' developmental patterns are influenced by their reciprocal interactions with their families and social environments, including religious institutions (Elgendy, 2010). Since adolescent behaviors are shaped by both their actions and the responses they receive from society, the transactional theory underscores the importance of considering adolescents and their religious or familial contexts as factors contributing to disruptive behaviors. In essence, when adolescents do not receive positive reinforcement from society for their actions, they may be inclined toward disruptive behaviors.

Bandura's social learning theory posits that individuals engage in collaborative learning environments where they share information, leading to the acquisition of new behaviors, particularly among adolescents through processes such as modeling and observation in social settings. These behaviors are influenced by the living conditions of adolescents, with

interactions within social environments like religious groups laying the groundwork for behavior development (Durmusoglu&İmi, 2018). The present study postulates that disruptive behavior in most Nigerian adolescents can be forecasted by factors such as gaming addiction, loneliness, and religiosity. The study's hypotheses suggest that gaming addiction and loneliness are positively associated with disruptive behavior, while religiosity is negatively linked. Despite the established impact of social support on various outcomes, research on its moderating role in the relationship between maladaptive cognition and marital satisfaction is scarce. Existing literature primarily treats social support as either a predictor or an outcome variable, neglecting its potential interaction effects, thereby hindering a comprehensive understanding of its ability to mitigate the adverse effects of negative cognitive patterns on marital and other forms of familyrelationships. Furthermore, limited research has delved into the dynamic processes or mechanisms, such as emotional regulation and partner communication, through which social support could exert its moderating influence. This gap is particularly evident in culturally diverse settings where the nuances of social support provision and its implications as moderators in marital cognition research remain inadequately explored (Conor et al., 2018; Navidian, Moudi, Esmaealzade, 2016).

Materials and Methods

Designs, Setting, and Sampling

This study is primarily a survey and cross-sectional design. The study participants were adolescents enrolled in both a model secondary school and a community secondary school located in Nsukka Urban. Selection of participants was conducted through convenient sampling, encompassing five classes spanning Junior Secondary School 1, 2, and 3, as well as Senior Secondary School 1, 2, and 3. The study sample consisted of 310 adolescent students, comprising 63 males and 237 females, aged between 11 and 21 years, with a mean age of 17.08 years and a standard deviation of .27. The ethnic composition of the sample was predominantly Igbo (86.7%), followed by Hausa (8.7%), Yoruba (7%), and other ethnic groups (7%). Concerning religion, the majority identified as Christians (91.0%), while a smaller proportion identified as Muslims (5.0%) and Traditionalists (4.0%). The study utilized four scales to assess various constructs, namely the Disruptive Behaviour Scale for Professed Students (DBS-PS), the Game Addiction Scale for Adolescents (GASA), the Ulca Loneliness Scale (ULS-8), and the Centrality of Religion Scale (CRS-5).

The Disruptive Behaviour Scale, developed by Veiga in 2008, comprises 16 items that assess student behavior leading to disruptions in the classroom. The scale is categorized into three factors: distraction transgression, schoolmates' aggression, and school authority aggression. Distraction transgression evaluates behaviors such as distraction, forgetfulness, contempt for class, and truancy. Schoolmates' aggression measures aggression among students and towards school assets. School authority aggression assesses acts of violence or provocation towards teachers and school property. Veiga (2008) reported internal consistency with Cronbach's alpha ranging from .67 to .88.

The Game Addiction Scale for Adolescents, designed by Lemmens et al. in 2009, comprises seven items aimed at evaluating gaming addiction based on DSM-5 criteria. The scale measures aspects such as gaming duration, loss of interest in other activities, obsession with gaming, withdrawal symptoms, inability to control gaming, persistent gaming despite negative consequences, and impaired functioning in other life domains. Each criterion is rated on a five-point scale ranging from "never" to "very often." Lemmens et al. (2009) reported a Cronbach's alpha of .86 for the gaming addiction scale.

Ulca-8 loneliness scale

The study involved adolescent students, who completed the UCLA Loneliness Scale (Russell et al., 1980), known as the ulca-8 loneliness scale. This self-report questionnaire, consisting of eight items, includes two positively worded questions that are reverse-scored. The responses are based on a four-point scale ranging from 1 (never) to 4 (usually), with higher scores indicating greater loneliness levels. The total score ranges from 8 to 32, with a reliability analysis conducted by Hughes et al. (2004) revealing a Cronbach's alpha coefficient of .91 for the ulca-8 loneliness scale.

Additionally, the study incorporated the Centrality of Religion scale developed by Huber and Huber (2012). This 5-item self-report tool assesses the significance of religion in an individual's personality. The scale measures various dimensions of religiosity, including the intellectual dimension, ideological dimension, public practice, private practice, and Religious Experience. Huber and Huber (2012) reported a composite Cronbach alpha of 0.85 for this scale,

Procedure of Data Collection and Analysis

The researchers obtained permission from two secondary schools: Model Secondary School and Community Secondary School, to conduct the research involving their students. The questionnaires were administered to the participants in their classrooms during the period when they were preparing for their mid-term break event. A total of 320 questionnaires were distributed without any time constraints, allowing the participants to complete them comfortably. Participants were assured of confidentiality and the freedom to withdraw from the study at any point without facing any consequences. No incentives were provided for participation. The questionnaires were designed in simple English to ensure comprehension by the participants, with clear instructions provided for each section. The researcher also offered explanations where needed to ensure clarity. Out of the 320 questionnaires returned, 10 were excluded due to irregularities, resulting in a final sample size of 310 participants who willingly took part in the study. Overall, the study involved administering the ulca-8 loneliness scale and the Centrality of Religion scale to adolescent students, following a systematic procedure that included obtaining consent from schools, ensuring participant confidentiality, and providing clear instructions for questionnaire completion. The data collected from the completed questionnaires were analyzed to explore the relationship between loneliness levels and the centrality of religion in the participants' lives.

From the data gathered, the researchers explored and analyzed the interplay among gaming addiction, loneliness, and religiosity as determinants of disruptive behavior in Nigerian

adolescents that participated in the study. The findings unveiled a significant and positive relationship between gaming addiction and disruptive behavior, aligning with previous research. For instance, Begum et al. (2019) indicated that heightened levels of anger and disruptive behavior correlate with gaming addiction, with disruptive behavior being a substantial contributor to the variance in game addiction. Similarly, the study by Lavkush et al. (2022) demonstrated a notable association between disruptive behavior disorder in children and increased video game usage, supporting the hypothesis that gaming addiction positively predicts disruptive behavior, suggesting that adolescents might replicate violent and disruptive behaviors observed in the video games they are addicted to. Conversely, the results indicated that loneliness did not forecast disruptive behavior in adolescents, refuting the hypothesis of a significant positive correlation between loneliness and disruptive behavior. The research outcomes also disclosed that religiosity significantly and inversely predicted disruptive behavior. This finding is consistent with prior research by Terzani & Turzo (2021), which highlighted the predictive link between religious practices and mental health issues. Furthermore, the work of Svob et al. (2023) proposed that individuals with religious affiliations engage in secure practices. Additionally, Luchetti et al. (2021) suggested that spirituality and religiosity play a crucial role in addressing mental health concerns, possibly attributed to the moral teachings inherent in various religions or the social support networks furnished by religious communities. Implications of the study's outcomes underscore the substantial positive predictive role of gaming addiction in fostering disruptive behavior among Nigerian adolescents. Consequently, adolescents' perceptions of video games and the quality of time allocated to playing them could influence the development of disruptive behaviors either negatively or positively. Furthermore, the research indicates that loneliness is not a significant predictor of disruptive behavior among adolescents, suggesting that feelings of loneliness are not directly associated with disruptive behavior in this demographic. Lastly, the study establishes religiosity as a substantial negative predictor of disruptive behavior in Nigerian adolescents, implying that engaging in healthy spiritual and religious practices can potentially mitigate the emergence of disruptive behavior.

Design/Statistics

The design of this study is primarily a survey and cross-sectional design. Pearson's correlation (r) analysis was conducted to analyze demographic, predictors, and outcome variables, while multiple regression analysis was applied in the prediction analysis.

Results

In Table 1, it was shown that some demographic variables were added as controls above the criterion variables. Results indicated that age ($r = .30, p < .01$), gender ($r = -.13, p < .05$), religion ($r = .13, p < .05$), ethnic group ($r = .24, p < .01$) and marital status ($r = .12, p < .05$) respectively correlated with disruptive behaviour. Meanwhile gaming addiction ($r = .32, p < .01$) and religiosity ($r = -.18, p < .01$) correlated with disruptive behaviour whereas loneliness did not.

Results of the hierarchical multiple regression in Table 2 for the test of the hypotheses indicated that demographic variables were entered in step 1 of the equation. However, age ($\beta = .25, p < .05$), gender ($\beta = -.08, p < .05$), and ethnicity ($\beta = .20, p < .05$) significantly predicts disruptive behaviour while religion and marital status did not. Meanwhile, in spite the variances in the predicting power of these demographic variables on disruptive behaviour, they were able to add 12% in explaining the variance in disruptive behaviour. Gaming addiction when added in step 2 of the equation, positively predicted disruptive behaviour ($\beta = .26, p < .01$) and also made an input of 19 % variance in explaining disruptive behaviour. In Step 3, it was indicated that loneliness did not predict disruptive behaviour. In addition, in Step 4, religiosity negatively predicts disruptive behaviour ($\beta = -.29, p < .01$) and as well contributed 25% variance in explaining disruptive behaviour.

Table 1: Correlations matrix among Demographic and the Study Variables

Variables	M	SD	1	2	3	4	5	6	7	8	9
1.Age	16.30	7.07	-								
2.Gender	-	-		-							
3.Religion	1.13	.44	.19**	-.16**	-						
4.Ethnic_group	1.20	.59	.16**	-.14*	.52**	-					
5.Marital_status	1.00	.11	.19**	-.04	-.01	-.02	-				
6.GamingAddiction	17.65	6.18	.12*	-.22**	.07	.09	.00	-			
7.Loneliness	20.78	4.56	.03	.08	.03	.07	.04	.31**	-		
8.Religiosity	17.31	5.15	.02	.19**	-.10	-.14*	.01	.28**	.46**	-	
9.DisruptiveBehaviour	36.39	8.97	.30**	-.13*	.13*	.24**	.12*	.32**	.02	-.18**	-

Note N = 300, **. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed)

Table 2: Hierarchical Multiple Regression of gaming addiction, loneliness and religiosity as predictors of disruptive behaviour

Variable	Step 1 <i>B</i>	Step 2 β	Step 3 <i>B</i>	Step 4 <i>B</i>
Predictors				
Age	.25*	.23**	.23**	.24**
Gender	-.08*	-.02	-.01	.04
Religion	-.04	-.04	-.04	-.05
Ethnic group	.20*	.19*	.20*	-.15*
Marital status	.07	.08	.08	.08

Gaming addiction		.26**	.29*	.35**
Loneliness			-.08	.02
Religiosity				-.29**
Adjusted R^2	.12	.19	.19	.25
ΔR^2	.14	.06	.01	.06
ΔF	11.44**	22.75**	2.14	24.04**

Note: * = $p < .05$, ** = $p < .01$.

Discussion

The research highlights the detrimental impact of excessive gaming on adolescent behavior and suggests that religious engagement may help mitigate disruptive behaviors. Ultimately, the study underscores the importance of awareness campaigns and educational interventions targeting gaming addiction and religious practices. By discerning the interplay between gaming addiction, loneliness, religiosity, and disruptive behavior, evidence-based strategies can be formulated to enhance the well-being of Nigerian adolescents, contributing to the existing body of knowledge in this field.

This study investigated the interplay among gaming addiction, loneliness, and religiosity as determinants of disruptive behavior in Nigerian adolescents. The findings unveiled a significant and positive relationship between gaming addiction and disruptive behavior, aligning with previous research. For instance, Begum et al. (2019) indicated that heightened levels of anger and disruptive behavior correlate with gaming addiction, with disruptive behavior being a substantial contributor to the variance in game addiction. Similarly, the study by Lavkush et al. (2022) demonstrated a notable association between disruptive behavior disorder in children and increased video game usage, supporting the hypothesis that gaming addiction positively predicts disruptive behavior, suggesting that adolescents might replicate violent and disruptive behaviors observed in the video games they are addicted to. Conversely, the results indicated that loneliness did not forecast disruptive behavior in adolescents, refuting the hypothesis of a significant positive correlation between loneliness and disruptive behavior. The research outcomes also disclosed that religiosity significantly and inversely predicted disruptive behavior. This finding is consistent with prior research by Terzani & Turzo (2021), which highlighted the predictive link between religious practices and mental health issues. Furthermore, the work of Svob et al. (2023) proposed that individuals with religious affiliations engage in secure practices. Additionally, Luchetti et al. (2021) suggested that spirituality and religiosity play a crucial role in addressing mental health concerns, possibly attributed to the moral teachings inherent in various religions or the social support networks furnished by religious communities. This study's outcomes underscore the substantial positive predictive role of gaming addiction in fostering disruptive behavior among Nigerian adolescents. Consequently, adolescents' perceptions of video games and the quality

of time allocated to playing them could influence the development of disruptive behaviors either negatively or positively. Furthermore, the research indicates that loneliness is not a significant predictor of disruptive behavior among adolescents, suggesting that feelings of loneliness are not directly associated with disruptive behavior in this demographic. Lastly, the study establishes religiosity as a substantial negative predictor of disruptive behavior in Nigerian adolescents, implying that engaging in healthy spiritual and religious practices can potentially mitigate the emergence of disruptive behavior.

This research underscores the significance of implementing measures to support prevention and intervention programs addressing gaming addiction and religiosity among adolescents in Nigeria. The interventions should prioritize the promotion of healthy coping mechanisms, self-regulation skills, and social connectivity to reduce the likelihood of developing disruptive behaviors. The results emphasize the necessity of creating initiatives that raise awareness among adolescents, parents, and the broader community about the potential consequences associated with excessive gaming and detrimental religious practices.

Regarding the limitations of the study, one constraint is the relatively small sample size utilized, consisting of 310 secondary school students. This sample size may not be fully representative of the secondary school student population in Nsukka or Nigeria as a whole. Some participants provided arbitrary responses while completing the questionnaire, potentially impacting the study results negatively. Additionally, the study may be vulnerable to self-report bias, where participants might either underreport or over-report their experiences due to social desirability or recall bias, potentially influencing the study findings. Furthermore, the generalizability of the study findings beyond the specific cultural and geographical contexts of Nigeria may be limited, affecting the understanding of the relationship between gaming addiction, loneliness, religiosity, and disruptive behavior. For future research directions, it is recommended that researchers employ larger sample sizes in similar studies to enhance the robustness of generalization. Longitudinal research could also be conducted to gain insights into the long-term effects of gaming addiction, loneliness, religiosity, and disruptive behavior among Nigerian adolescents, thereby elucidating causal relationships and developmental trajectories.

Conclusion

This study explored the predictive roles of gaming addiction, loneliness, and religiosity in relation to disruptive behavior among Nigerian adolescents. The study carried its investigation and applied the principles drawn from various theoretical frameworks such as self-discrepancy theory, social learning theory, frustration-aggression theory, psychoanalysis theory, and problem behavior theory. The findings confirm that gaming addiction and religiosity significantly predict disruptive behavior, while the hypothesis regarding loneliness as a predictor of disruptive behavior was not supported.

- Declaration of conflicting interest
("The authors declare no conflict of interest")
- Funding statement

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- Data availability statement

(Share our research data in a relevant public data repository)

- Informed Consent

Informed Consent was obtained from all the individual participants included in the study.

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