

Association between Online Gaming Addiction and Aggressive Behavior among Junior High School Adolescents in Soreang.

Zaenal Muttaqin*, Dinda Dwi Meina Maulida, Muryati, Vera Fauziah Fattah, Dian Yuniar Syanti Rahayu, Indita Wilujeng Astiti

Jurusan Kependidikan, Poltekkes Kemenkes, Bandung, Indonesia

*Correspondence Address: muttaqinz680@gmail.com

Article Info

Article History

Received: Sep 02, 2025

Revised: Nov 21, 2025

Accepted: Dec 12, 2025

Keywords:

Online gaming addiction,
Aggressive behavior,
Adolescents

ABSTRACT

Online gaming addiction and aggressive behavior among adolescents have elicited worries over potential behavioral consequences, particularly the increase in aggressive tendencies. The situation necessitates scientific inquiry, given students' increasing exposure to online media. The objective of this study is to investigate the relationship between online game addiction and aggressive conduct in junior high school students. This study employed a quantitative, cross-sectional design. A total of 104 students from one junior high school were chosen using simple random sampling. The tools utilized were the Game Addiction Scale (GAS) and the Buss-Perry Aggression Questionnaire (BPAQ). Spearman's rank correlation test was used to assess the data. The analysis indicated that 51% of students exhibited moderate addiction to online games, 32.7% showed low levels of addiction, and 16.3% displayed strong addiction. Concerning aggressive conduct, 53.8% were classified as moderate, 32.7% as mild, and 13.5% as high. Spearman's test revealed a weak positive correlation between online game addiction and aggression (p -value = 0.008; r = 0.259), suggesting a low positive correlation rather than a "strong link," since r falls within the weak-moderate range. Therefore, the conclusion should be statistically more precise. The results indicate that elevated levels of online game addiction correlate with heightened aggressive behavior. Consequently, parents and educational institutions must monitor students' gaming behavior and promote better digital interactions.

INTRODUCTION

The advent of digital technology has markedly enhanced access to several forms of entertainment, particularly online games, which adolescents highly favor. While these games may offer amusement, excessive involvement can lead to adverse outcomes. Prolonged gaming can result in addiction, adversely affecting an individual's mental health and social interactions. This problem is especially disruptive during adolescence, a period when individuals are exploring their identities and may struggle to regulate their emotions.

Online gaming addiction can lead to dysfunction in daily life, including sleep difficulties, decreased academic performance, and social strife. Additionally, many studies show that

violent games can increase aggressive behavior, as players often mimic and replicate the activities they observe in the game. According to studies by Lemmens et al. (2009) and Greitemeyer (2022), Online gaming and everyday dysfunction, as well as the link between violent content and aggression, there are still significant gaps in understanding the specific mediation mechanisms that link online gaming exposure to violence in specific cultural contexts, or how self-regulation strategies can moderate these relationships. Therefore, this study aims to explicitly investigate [mention the unique focus of your study, e.g., the role of empathy/impulsivity as a mediator, or the effects of mindfulness-based intervention programs] to provide new insights that previous studies have not revealed. (Greitemeyer, 2022).

Aggressiveness in adolescents represents an emotional reaction to frustration, social pressure, or exposure to media that incites violence. Giordano et al., (2023) Confirmed that lower emotion regulation significantly predicted internet gaming disorder severity among American adolescents, particularly in males. Moreover, School-level contexts, particularly academic achievement levels, show significant effects on child aggression in seventh grade, with low-achieving schools contributing to increased aggressive behavior. (Sanders et al., 2020).

This study seeks to investigate the correlation between online gaming addiction and aggressive behavior among teenagers, with a particular emphasis on One Junior High School in Soreang, Indonesia. The objective is to understand how excessive internet gaming can adversely affect adolescents' behavioral development. Furthermore, the results of this study are anticipated to facilitate the formulation of effective prevention and intervention measures.

METHODS

This study uses a quantitative design utilizing a cross-sectional methodology. This methodology was selected for analyzing the correlation between two variables: online game addiction and aggressive conduct, assessed at a particular moment without researcher intervention. The subjects of this study were students from one junior high school in Soreang, Bandung Regency. The inclusion criteria comprise students who are currently enrolled in school, involved in online gaming, and willing to participate as respondents by providing written consent. The sample size comprises 104 respondents, determined using Slovin's algorithm with a 5% margin of error. Consequently, the basic random sampling technique was employed to ensure the sample was both representative and equitable. The study was carried out in one Junior High School, specifically selected for its accessibility and the pertinence of its population to the research aims.

The research was conducted in one junior high school, Soreang, selected for data collection due to its accessibility and the population's relevance to the research aims. Ethical considerations were comprehensively handled by obtaining ethical approval from the Ethics Committee for Research at Poltekkes Kemenkes Bandung. This research has been deemed ethically sound, as shown by number: 43/KEPK/EC/IV/2025. Throughout the study, the researcher upholds the principle of informed consent, safeguards the confidentiality of participant names, and refrains from imposing any physical or psychological hazards on subjects. The measurement tool comprises two standardized questionnaires. The Game Addiction Scale (GAS), created by Lemmens et al. and adapted for Indonesian, is employed to

assess the degree of online game addiction. This measure comprises seven addiction indicators evaluated on a Likert scale. The Buss-Perry Violence Questionnaire (BPAQ) is employed to assess aggressive behavior, encompassing four dimensions: physical violence, verbal aggression, anger, and hostility.

RESULTS

The objective of this research is to ascertain the hypothesis that there is a correlation between addiction to engaging in online games and aggressive behavior in adolescents attending one junior high school, Soreang. Data from two primary variables—the amount of aggressive behavior and the level of addiction to online gaming—were included in the analysis, which used both descriptive and inferential methods. The Game Addiction Scale (GAS) and the Buss-Perry Aggression Questionnaire (BPAQ) were the two validated instruments used in the data collection process. The findings that are directly relevant to the research questions and objectives are highlighted in this section.

Table 1. Distribution of the Demographic Data of Students at Soreang Junior High School, Grades VII to IX, in 2025

Characteristic	n	%
Class	7	35
	8	37
	9	32
Gender	Male	52.9
	Female	47.1

Source: Primary Data, 2025

The demographic data indicate that among the 104 participating students, 55 (52.9%) are male and 49 (47.1%) are female. According to grade level, 35 students (35.6%) are from class VIII, 35 kids (33.7%) are from class VII, and 32 students (30.8%) are from class IX.

Table 2. Distribution of the Game Online Addiction among Students of one junior high school, Soreang

Game online addiction	n	%
Low	34	32.7
Moderate	53	51
High	27	16.3

Source: Primary Data, 2025

The measurement results indicate that the majority of respondents, specifically 53 students (51%), fall into the moderate addiction group for online gaming. A total of 34 pupils (32.7%) are classified in the low category, while 17 students (16.3%) are classified in the high category. This research reveals that over fifty percent of the respondents exhibit symptoms of addiction with moderate severity.

Table 3. Distribution of the Aggressive Behavior among Students of one junior high school, Soreang

Aggressive behavior	n	%
Low	34	32.7%
Moderate	56	53.8%
High	14	13.5%

Source: Primary Data, 2025

The study results for the aggressive behavior variable, using the BPAQ, indicated that 56 students (53.8%) were categorized as moderate, 34 students (32.7%) as mild, and 14 students (13.5%) as extreme. The predominant type of aggressiveness observed was in the realms of wrath and verbal hostility.

Table 4. Spearman's Rank Rho Analysis

Variable	r	p-Value
	0.259*	0.008*

Source: Primary Data (Processed), 2025

Spearman's Rank statistical tests indicate a significant positive correlation between online gaming addiction and aggressive behavior. The result is statistically significant at the 5% level, shown by a p-value of 0.008. The correlation coefficient $r = 0.259$ indicates a somewhat weak, though consistently directional, link. This signifies that an escalation in students' online gaming addiction correlates with an increased propensity for aggressive behavior, whether verbal, emotional, or physical.

DISCUSSION

The research findings indicate that most participants were male students aged 13 to 15, classified as middle adolescents. Researchers emphasize that age and gender substantially affect the likelihood of gaming engagement, as adolescents are currently exploring technology alternatives and seeking entertainment that aligns with their tastes. This approach aligns with Sarwono's assertion that adolescents are in a stage of identity exploration, often marked by fascination with novel and competing situations. (Hikmandayani et al., 2023). Moreover, younger men participate more in video games and eGames, while digital vulnerability manifests differently across genders and age groups. (Carcelén-García et al., 2023).

The findings indicated that the majority of respondents were classified within the moderate range for online game addiction. Researchers have noted that games have become integral to daily activities and can influence, if not moderated. A systematic review by Estupiñá et al., (2024) Examining 18 studies confirmed that emotional dysregulation plays a crucial role in problematic video game use, particularly through emotional suppression strategies and a lack of ability to understand and control emotions. Gaming time thresholds have been proposed, with more than 3 hours daily being indicative and more than 5 hours diagnostic of Internet Gaming Disorder. (Buettner et al., 2020).

Research demonstrates that gaming addiction among teenagers is strongly associated with stress and exhibits classic addiction traits, including salience, tolerance, and withdrawal. Infanti et al. (2023) confirmed that specific gaming disorder symptoms, including salience, tolerance, and withdrawal, are key indicators of problematic gaming behavior, supporting the substance use disorder framework for understanding gaming addiction. Meanwhile, teenagers with computer addiction tend to distance themselves from reality, experiencing drops in academic results and a lack of interest in educational content. (Barbu, 2023).

The manifestation of aggressive behavior was predominantly mild. Researchers argue that this violence is predominantly an emotional reaction elicited by anger during play, such as losing a game or being distracted by the environment. Children identify in-game failures, teammate incompetence, and technical problems as primary triggers for "gamer rage." This rage manifests through verbal expressions, physical actions, and quitting games (Kahila et al., 2022). Toxic behaviors in online multiplayer games, including hostile communication and sabotage, are prevalent and linked to negative psychological consequences for victims. (Zsila et al., 2022).

Meta-analytic evidence suggests that violent video games increase aggression and decrease prosocial behavior, while prosocial games have opposite effects, with cognitive and affective variables mediating these relationships. (Greitemeyer, 2022). The research findings demonstrate a substantial positive link between online game addiction and aggressive conduct, evidenced by a p-value of 0.008 and a correlation coefficient of $r = 0.259$. Researchers demonstrate that, despite the relationship's relatively moderate strength, it nonetheless suggests a pattern in which heightened engagement in gaming correlates with increased aggressive conduct.

Social factors through longitudinal analysis of Korean adolescents, finding that negative emotions reduce social intelligence and increase aggression, which subsequently associates with higher pathological gaming levels (Lee et al., 2024). Furthermore, gamers meeting criteria for internet gaming disorder exhibited greater emotion regulation difficulties, higher impulsivity, and lower mindfulness compared to controls, with these effects being particularly pronounced when depression was comorbid. (Marchica et al., 2020).

Family factors play a crucial role, with parental rearing patterns, communication quality, and support levels directly influencing adolescent gaming behaviors. (Nursalam et al., 2023). Specifically, fathers' preferences and mothers' denials in parenting styles moderate the relationship between moral disengagement and aggression in adolescents exposed to violent video games. (Li et al., 2020). The interplay between violent video game exposure and inadequate parental supervision creates conditions where moral disengagement mediates the relationship between gaming and aggressive behaviors, highlighting the critical importance of family oversight in preventing problematic gaming patterns. (Li et al., 2020).

CONCLUSION

The findings revealed that the majority of students at one junior high school exhibited a moderate level of online game addiction. This shows that online gaming has become a fairly common activity, shaping teenagers' daily lives. The addiction is characterized by longer gaming sessions and a strong urge to keep playing, even when it interferes with other

responsibilities. For the aggressive behavior variable, most students also showed a moderate level of aggressiveness. Aggressive behaviors that emerge are generally expressed as anger, irritability, or harsh words when facing disruptions or losses in the game. This indicates that adolescents' emotional control is not yet stable, and gaming habits can reinforce negative emotional response patterns.

Based on the Spearman Rank Correlation test, there was a significant positive correlation between *online gaming addiction* and aggressive behavior, with a value of $p = 0.008$ and a correlation coefficient of $r = 0.259$. This indicates that as the level of addiction increases, so does the likelihood of students exhibiting aggressive behavior.

Therefore, parents and teachers need to take an active role in monitoring *game time* and educating students about emotional management and responsible use of technology. Academically, these findings pave the way for further research. It is suggested that future research focus on testing specific mediating variables, such as *self-control* or empathy levels, to understand the causal mechanisms underlying the relationship between *online gaming addiction* and aggression. In addition, longitudinal studies are needed to confirm the direction of the relationship (causality) and the long-term impact of the proposed preventive intervention.

REFERENCES

Barbu, E. G. (2023). Dependence on virtual space is a risk factor in the development of social self-efficacy in adolescents. *Studia Universitatis Moldaviae. Seria Științe Ale Educației*, 5(165), 59–63. [https://doi.org/10.59295/SUM5\(165\)2023_10](https://doi.org/10.59295/SUM5(165)2023_10)

Buettner, R., Blattner, M., & Reinhardt, W. (2020). Internet Gaming more than 3 Hours a Day is Indicative and more than 5 Hours is Diagnostic: Proposal of Playing Time Cutoffs for WHO-11 and DSM-5 Internet Gaming Disorder Based on a Large Steam Platform Dataset. *Proceedings - 2020 IEEE 6th International Conference on Big Data Computing Service and Applications, BigDataService 2020*, 189–192. <https://doi.org/10.1109/BIGDATASERVICE49289.2020.00037>

Carcelén-García, S., Narros-González, M. J., & Galmes-Cerezo, M. (2023). Digital vulnerability in young people: gender, age, and online participation patterns. *International Journal of Adolescence and Youth*, 28(1). [https://doi.org/10.1080/02673843.2023.2287115;PAGE:STRING:ARTICLE/CHAPTER](https://doi.org/10.1080/02673843.2023.2287115)

Estupiñá, F. J., Bernaldo-de-Quirós, M., Vallejo-Achón, M., Fernández-Arias, I., & Labrador, F. (2024). Emotional regulation in Gaming Disorder: A systematic review. *American Journal on Addictions*, 33(6), 605–620. <https://doi.org/10.1111/AJAD.13621>

Giordano, A. L., Schmit, M. K., & McCall, J. (2023). Exploring adolescent social media and internet gaming addiction: The role of emotion regulation. *Journal of Addictions & Offender Counseling*, 44(1), 69–80. <https://doi.org/10.1002/JAOC.12116>

Greitemeyer, T. (2022). The dark and bright side of video game consumption: Effects of violent and prosocial video games. *Current Opinion in Psychology*, 46. <https://doi.org/10.1016/J.COPSYC.2022.101326>

Hikmandayani, H., Herdiani, R. T., Antari, I., Oktari, S., Yuniarni, D., Amenike, D., Idrus, I., Fajriah, L., Marlina, M., Salim, N. A., Herik, E., Sulaiman, S., & Yantyi, D. (2023). Psikologi

Perkembangan Remaja. *PSIKOLOGI PERKEMBANGAN REMAJA*, 24. <https://repository.penerbiteureka.com/publications/565319/>

Infanti, A., Valls-Serrano, C., Perales, J. C., Vögele, C., & Billieux, J. (2023). Gaming passion contributes to the definition and identification of problematic gaming. *Addictive Behaviors*, 147, 107805. <https://doi.org/10.1016/J.ADDBEH.2023.107805>

Kahila, J., Viljaranta, J., Kahila, S., Piispa-Hakala, S., & Vartiainen, H. (2022). Gamer rage—Children's perspective on issues impacting losing one's temper while playing digital games. *International Journal of Child-Computer Interaction*, 33. <https://doi.org/10.1016/J.IJCCI.2022.100513>

Lee, S. J., Jeong, E. J., Choi, J. I., & Park, M. S. (2024). Social intelligence and pathological gaming: a longitudinal study of the associations among negative emotions, social intelligence, aggression, and pathological gaming in adolescents. *Frontiers in Psychiatry*, 15, 1353969. <https://doi.org/10.3389/FPSYT.2024.1353969/XML>

Lemmens, J. S., Valkenburg, P. M., & Peter, J. (2009). Development and validation of a game addiction scale for adolescents. *Media Psychology*, 12(1), 77–95. <https://doi.org/10.1080/15213260802669458>

Li, J. Y., Du, Q., & Gao, X. (2020). Adolescent aggression and violent video games: The role of moral disengagement and parental rearing patterns. *Children and Youth Services Review*, 118, 105370. <https://doi.org/10.1016/J.CHILDYOUTH.2020.105370>

Marchica, L. A., Mills, D. J., Keough, M. T., & Derevensky, J. L. (2020). Exploring Differences among Video Gamers with and Without Depression: Contrasting Emotion Regulation and Mindfulness. *Cyberpsychology, Behavior, and Social Networking*, 23(2), 119–125. <https://doi.org/10.1089/CYBER.2019.0451>

Nursalam, Iswanti, D. I., Agustiningsih, N., Rohmi, F., Permana, B., & Erwansyah, R. A. (2023). Factors contributing to online game addiction in adolescents: a systematic review. *International Journal of Public Health Science (IJP-HS)*, 12(4), 1763–1770. <https://doi.org/10.11591/IJP-HS.V12I4.23260>

Sanders, M. T., Bierman, K. L., & Heinrichs, B. S. (2020). Longitudinal Associations Linking Elementary and Middle School Contexts with Student Aggression in Early Adolescence. *Journal of Abnormal Child Psychology*, 48(12), 1569–1580. <https://doi.org/10.1007/S10802-020-00697-6>

Zsila, Á., Shabahang, R., Aruguete, M. S., & Orosz, G. (2022). Toxic behaviors in online multiplayer games: Prevalence, perception, risk factors of victimization, and psychological consequences. *Aggressive Behavior*, 48(3), 356–364. <https://doi.org/10.1002/AB.22023>