

The Relationship Between Online Game Use Intensity and Verbal Aggression Among Junior High School Students

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Article Info	ABSTRACT
Article history Received: 13-08-2026 Revised: 25-09-2026 Accepted: 29-09-2026 Published: 30-09-2026 Keywords online game; gaming intensity; verbal aggression; junior high school; adolescent behavior Corresponding Author Muh. Afrijal Universitas Pendidikan Mandalika, Mataram, Indonesia *E-mail: muhafrijal0402@gmail.com	<i>This study examines the relationship between the intensity of online game use and verbal aggressive behavior among eighth-grade students at SMPN 17 Mataram during the 2025/2026 academic year. The study employed a quantitative approach with a correlational research design. The population comprised 92 eighth-grade students from classes VIII A and VIII B, all of whom were included through total sampling. Data were collected using structured questionnaires measuring the intensity of online game use and verbal aggressive behavior, with the instruments subjected to validity and reliability procedures. The data were analyzed using the Pearson Product-Moment correlation test with the assistance of SPSS. The results showed a positive and statistically significant relationship between the intensity of online game use and students' verbal aggressive behavior ($r = 0.208$, $p < 0.05$). Although the correlation coefficient indicates a weak relationship, the finding suggests that variations in online game use are associated with differences in students' verbal aggressive behavior. These findings highlight the importance of collaborative monitoring by schools, guidance and counseling teachers, and parents in supporting students' responsible digital behavior and developing healthier communication patterns. The study provides empirical evidence concerning the relationship between online gaming habits and verbal aggression among junior high school students.</i>
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INTRODUCTION

The rapid development of information and communication technology has substantially transformed adolescents' patterns of communication, entertainment, and social interaction. One prominent manifestation of this transformation is the increasing popularity of online gaming, which has evolved beyond a recreational activity into a digital social environment that facilitates real-time interaction among players. Through text-chat and voice-chat features, online games provide opportunities for adolescents to communicate, collaborate, compete, and establish social relationships with other players. This development is particularly relevant in Indonesia, where internet access has expanded considerably. The Indonesian Internet Service Providers Association reported that the number of internet users in Indonesia reached 221.56 million in 2024, corresponding to an internet penetration rate of 79.5%. Adolescents and younger generations constitute an important segment of this digitally connected population, making online gaming an increasingly relevant component of contemporary adolescent life (APJII, 2024).

Among adolescents, particularly junior high school students, online games such as *Mobile Legends*, *Free Fire*, *PUBG Mobile*, and *eFootball* have become common forms of digital entertainment and social interaction. These games typically incorporate competitive challenges, team-based activities, ranking systems, rewards, and real-time communication, which may encourage sustained engagement. Online gaming itself should not necessarily be regarded as detrimental, as digital games may provide opportunities for entertainment, social connection, problem solving, and other forms of cognitive engagement. However, concerns may arise when gaming becomes excessive or develops into problematic patterns that interfere with adolescents' psychological and social functioning. A systematic review by Coutelle et al. (2024) indicated that problematic gaming during adolescence is associated with various psychosocial and psychiatric difficulties, highlighting the importance of examining the behavioral consequences of intensive engagement with digital games.

One behavioral dimension that deserves particular attention is aggression, especially verbal aggression. Aggression generally refers to behavior intended to harm, offend, or cause distress to another individual, either physically or psychologically. Verbal aggression represents a specific manifestation of aggression expressed through language, including insults, ridicule, profanity, threats, derogatory statements, and other forms of hostile communication. Buss and Perry (1992), through the development of the Aggression Questionnaire, conceptualized aggression as comprising physical aggression, verbal aggression, anger, and hostility. Within the context of adolescent online gaming, verbal aggression may emerge through competitive interactions, frustration following defeat, conflicts among team members, or disagreements between players.

The interactive nature of online gaming creates an environment in which adolescents are continuously exposed to diverse forms of interpersonal communication. Competitive situations may generate emotional tension, particularly when players experience failure, receive criticism, or perceive that other players have negatively affected their performance. Under such circumstances, hostile expressions, insults, mockery, and profanity may become part of the communication patterns occurring during gameplay. Recent research has identified negative

interpersonal behaviors as an important issue within multiplayer online gaming environments. Marques et al. (2024), for example, highlighted the occurrence of disruptive and harmful behaviors in online gaming and emphasized the importance of behavioral interventions to promote healthier forms of interaction in digital environments.

Empirical research has increasingly examined the association between problematic gaming and aggressive behavior. Li et al. (2023), in a meta-analysis involving 30 samples and 20,790 adolescents and young adults, reported a moderate positive association between Internet Gaming Disorder and aggression ($r = .300$, 95% CI [.246, .353]). This finding indicates that higher levels of problematic gaming are associated with greater aggression among adolescents and young adults. Importantly, however, the relationship should not be interpreted as evidence of a simple causal effect of gaming on aggression. The association may be influenced by individual, social, and contextual factors, including age, geographical region, psychological characteristics, and patterns of gaming engagement.

Similarly, Deng et al. (2024) reported an association between Internet Gaming Disorder symptoms, exposure to violent games, psychological distress, and aggression among adolescents. However, evidence concerning the relationship between violent video games and aggression remains complex. A longitudinal study conducted among Czech adolescents by Lacko et al. (2024), for instance, found positive associations between exposure to violent video games and aggression at the between-person level, while the within-person analyses did not provide equally strong evidence for a direct longitudinal effect. These findings suggest that the relationship between digital gaming and aggression cannot be adequately explained through a single mechanism. Instead, the relationship needs to be examined in specific developmental, social, and educational contexts.

The relationship between online gaming and verbal aggression can also be theoretically understood through Bandura's Social Learning Theory. Bandura (1977, 1978) proposed that human behavior can be acquired through observation, imitation, and the consequences associated with observed behavior. Individuals may learn behavioral patterns by observing models in their social environment and subsequently reproducing behaviors that appear to be reinforced or socially accepted. In online gaming environments, other players can function as social models, while text-chat and voice-chat features provide opportunities for repeated exposure to particular communication patterns. Consequently, when insults, ridicule, profanity, or hostile expressions are repeatedly observed and reinforced within a gaming environment, such behaviors may potentially be learned and reproduced by players. This theoretical perspective provides a useful framework for examining why intensive engagement in interactive gaming environments may be associated with adolescents' patterns of verbal aggression.

Nevertheless, it is important to distinguish between the intensity of online gaming and gaming disorder. Gaming intensity generally concerns the frequency, duration, or level of involvement in gaming activities, whereas gaming disorder refers to a more specific behavioral pattern characterized by impaired control over gaming, increasing priority given to gaming, and continuation of gaming despite negative consequences. Therefore, examining the relationship between gaming intensity and verbal aggression does not imply that online gaming necessarily

causes aggressive behavior. A correlational approach is more appropriate for determining whether variations in gaming intensity are statistically associated with variations in verbal aggression among a particular population. Such conceptual precision is essential to avoid interpreting correlational evidence beyond what the research design can substantiate.

From an educational perspective, this issue is particularly important because junior high school students are generally situated within the early stages of adolescence, a developmental period characterized by substantial changes in emotional regulation, social relationships, self-concept, and behavioral patterns. During this period, peer relationships become increasingly influential, while adolescents are simultaneously developing greater independence in their use of digital technologies. Communication patterns developed in digital environments may therefore become relevant to adolescents' broader interpersonal interactions. Consequently, schools, teachers, counselors, and parents need empirical information regarding how adolescents engage with online gaming and whether intensive gaming is associated with problematic forms of verbal interaction.

Although previous studies have contributed substantially to understanding the relationship between gaming and aggression, several research gaps remain. First, a considerable proportion of previous research has focused on Internet Gaming Disorder, violent video game exposure, or general aggression rather than specifically examining the relationship between online gaming intensity and verbal aggression. Second, many studies have investigated adolescents and young adults as relatively broad populations, making it difficult to determine whether their findings are directly applicable to students in the early stages of adolescence. Third, empirical evidence from the Indonesian junior high school context remains comparatively limited, particularly research examining verbal aggression as a distinct behavioral outcome. Differences in cultural, educational, and social environments further support the need for context-specific investigation rather than relying exclusively on findings from other countries.

The present study addresses this gap by focusing specifically on Grade VIII students at SMPN 17 Mataram during the 2025/2026 academic year. The study examines whether the intensity of online gaming is statistically associated with verbal aggression among junior high school students. Focusing on a specific early-adolescent population provides a more contextually grounded understanding of the relationship between digital gaming behavior and interpersonal communication. The study is therefore expected to contribute empirical evidence to the literature on adolescent digital behavior, particularly by distinguishing gaming intensity from gaming disorder and by examining verbal aggression as a specific dimension of aggressive behavior.

Accordingly, this study aims to examine the relationship between the intensity of online gaming and verbal aggression among Grade VIII students at SMPN 17 Mataram during the 2025/2026 academic year. The findings are expected to provide a contextual empirical basis for educators, school counselors, and parents in understanding adolescents' online gaming behavior and developing appropriate educational strategies to promote healthy digital engagement and constructive interpersonal communication.

METHOD

1. Research Design

This study employed a quantitative correlational design to examine the relationship between online game use intensity (X) and verbal aggressive behavior (Y) among junior high school students. The study involved preliminary observation and interviews with a school counselor, instrument development, instrument testing, data collection, and statistical analysis. Because the study used a correlational design without experimental manipulation, the findings were interpreted as associations rather than causal relationships (Appelbaum et al., 2018).

Population and Sample

The population comprised all eighth-grade students at SMPN 17 Mataram, Indonesia, during the 2025/2026 academic year. The population consisted of 92 students: 46 students from Class VIII A and 46 from Class VIII B. A total sampling technique was employed; therefore, all 92 students participated as research respondents.

2. Instruments and Data Collection

Data were collected using two four-point Likert-scale questionnaires. The online game use intensity questionnaire consisted of four dimensions: frequency, duration, attention, and emotional involvement, based on the conceptualization of behavioral intensity (Chaplin, 2011). The verbal aggression questionnaire was developed based on Infante and Wigley's (1986) verbal aggressiveness construct and covered character attacks, competence attacks, insults, ridicule, profanity, threats, and related verbal/nonverbal aggressive expressions.

Prior to the main study, the instruments were pilot-tested with 30 students from SMPN 21 Mataram who were not included in the research sample. Item validity was examined using Pearson's Product-Moment correlation, resulting in 22 valid items for each instrument. Internal consistency was assessed using Cronbach's alpha. Both instruments demonstrated acceptable reliability; the exact alpha coefficients should be reported based on the original SPSS output (Boateng et al., 2018).

3. Data Analysis

The data were analyzed using IBM SPSS Statistics. Descriptive statistics were first calculated to summarize the distributions of both variables. The assumptions of normality and linearity were then examined before conducting the hypothesis test. The relationship between online game use intensity and verbal aggressive behavior was tested using the Pearson Product-Moment correlation coefficient (r) at a significance level of $\alpha = .05$. With 92 participants, the degrees of freedom were $df = N - 2 = 90$. Statistical significance was determined using the two-tailed p -value, with $p < .05$ indicating a statistically significant relationship. The correlation coefficient was also interpreted in terms of its direction and magnitude. In accordance with the correlational design, a significant association was not interpreted as evidence of a causal effect (Appelbaum et al., 2018).

RESULTS AND DISCUSSION

A. Results

Data were collected from 92 eighth-grade students from Classes VIII A and VIII B at SMPN 17 Mataram. The descriptive analysis showed that the mean score for online game use intensity was 71.94, whereas the mean score for verbal aggression was 68.96. These findings indicate variations in both students' gaming intensity and their tendency to display verbally aggressive behaviors.

The relationship between online game use intensity and verbal aggression was examined using the Pearson Product–Moment correlation test. The results are presented in Table 1.

Table 1. Pearson Product Moment Correlation Between Online Game Use Intensity and Verbal Aggression

Variables	Online Game Use Intensity	Verbal Aggression
Online Game Use Intensity	1	[r = ...]
Sig. (2-tailed)	–	[p = ...]
N	92	92
Verbal Aggression	[r = ...]	1
Sig. (2-tailed)	[p = ...]	–
N	92	92

Note. Correlation is significant at the 0.05 level (2-tailed).

The Pearson Product–Moment analysis revealed a positive and statistically significant correlation between online game use intensity and verbal aggression among the students ($r =$ [insert exact value], $p =$ [insert exact value]). Because the significance value was below the predetermined alpha level of 0.05, the null hypothesis was rejected and the alternative hypothesis was supported.

The positive direction of the correlation indicates that higher levels of online game use intensity were associated with higher levels of verbal aggression. Conversely, students with lower levels of gaming intensity tended to report lower levels of verbal aggression. However, because the study employed a cross-sectional correlational design, the finding should be interpreted as an association rather than evidence that intensive online gaming directly causes verbal aggression.

B. Discussion

The present study demonstrates a significant positive relationship between online game use intensity and verbal aggression among eighth-grade students at SMPN 17 Mataram. The finding suggests that students who reported greater involvement in online gaming also tended to report higher levels of verbally aggressive behavior. In the context of this study, gaming intensity encompasses behavioral and psychological involvement in gaming, including the frequency and duration of playing as well as attention and emotional involvement.

This finding is consistent with recent empirical evidence concerning the relationship between problematic gaming and aggression among adolescents. Wang et al. (2023), through a

meta-analysis involving 30 samples and 20,790 participants, reported a moderate positive relationship between Internet Gaming Disorder and aggression ($r = .300$, 95% CI [.246, .353]). Their analysis further indicated that the strength of this association varied according to factors such as geographical region, age, and year of study. These findings provide broader empirical support for the positive association identified in the present study, although the current research specifically focuses on online gaming intensity and verbal aggression among junior high school students.

More specifically, Nurdin et al. (2024) examined students at SMP Negeri 10 Makassar and found that online game playing intensity was positively and significantly associated with verbal aggression. Their study involved 117 junior high school students who played *Mobile Legends: Bang Bang* and reported an R^2 of .184 with $p < .001$. This means that the intensity of online gaming was statistically associated with variation in students' verbal aggression. The similarity between their findings and the present results strengthens the empirical relevance of examining gaming intensity in relation to verbal aggression within junior high school populations.

A similar pattern was reported by Abdurrahman (2026) in a study involving 60 eighth-grade students. Using Pearson Product–Moment correlation, the study found a moderate positive correlation between online gaming intensity and verbal aggressive behavior ($r = .534$, $p < .05$). The study specifically identified behaviors such as shouting, arguing, and using harsh language as manifestations of verbal aggression. This evidence is particularly relevant to the present study because both studies focus on eighth-grade students and employ a correlational framework to examine gaming intensity and verbal aggression.

Recent evidence also suggests that the relationship between gaming and aggression may involve several psychological and social mechanisms rather than gaming intensity alone. Lee et al. (2024), using three-year longitudinal data from 968 Korean adolescent gamers, reported associations among negative emotions, social intelligence, aggression, and pathological gaming. Their findings indicated that negative emotions were associated with reduced social intelligence and increased aggression, while aggression was subsequently associated with higher levels of pathological gaming. This suggests that adolescents' emotional and interpersonal characteristics may play an important role in understanding the relationship between gaming behavior and aggression.

The relationship can also be understood from the perspective of Social Learning Theory, which emphasizes that behavior can be learned through observation, imitation, and reinforcement. In online multiplayer gaming environments, adolescents may encounter communication patterns involving insults, ridicule, provocation, hostile expressions, or other forms of toxic interaction. Repeated exposure to such communication may contribute to the normalization of aggressive verbal expressions, particularly when these behaviors receive social reinforcement from peers or are perceived as part of the gaming culture.

This interpretation is supported by research on toxic behavior in online gaming. Sun et al. (2025) examined toxic behavior in multiplayer online games and highlighted the relevance of witnessed verbal aggression, gaming engagement intensity, and social self-efficacy in understanding toxic behavior. Thus, the social environment surrounding online gaming should

be considered when interpreting the association between gaming intensity and aggressive communication.

The role of peer influence is also important. Angelini et al. (2024) found that perceived peer gaming frequency and social norms were positively associated with adolescents' gaming behavior and problematic gaming. Their findings suggest that gaming does not occur independently of the adolescent's social environment. Peer norms may influence how frequently adolescents play and how they perceive particular behaviors as acceptable.

Another possible explanation involves frustration and emotional regulation. Competitive online games commonly involve winning and losing, time pressure, performance evaluation, and interactions with other players. Repeated experiences of failure or frustration may generate negative emotional responses, which can be expressed verbally. The frustration–aggression perspective proposes that frustration can contribute to aggressive responses under particular psychological and contextual conditions (Kruglanski et al., 2023). However, this mechanism should be regarded as a possible explanation rather than a direct causal conclusion from the present correlational data.

Importantly, the present findings should not be interpreted to mean that online gaming inherently produces aggressive behavior. Gaming is a heterogeneous activity, and its psychological and social effects can depend on the type of game, duration and pattern of use, motivations for gaming, interpersonal context, individual characteristics, and the quality of social interactions experienced during play. The World Health Organization's 2024 report on adolescents similarly distinguishes ordinary gaming from problematic gaming. Based on the 2021/2022 HBSC survey across 44 countries and regions, 34% of adolescents reported playing digital games daily, while 12% were classified as being at risk of problematic gaming.

Recent systematic evidence further indicates that problematic gaming among adolescents is associated with emotional and behavioral difficulties. Coutelle et al. (2024), in a systematic review, reported associations between problematic gaming and emotional and behavioral problems as well as other psychological difficulties among adolescents. These findings suggest that gaming behavior should be examined within a broader developmental and psychosocial framework rather than considered as an isolated predictor of adolescent behavior.

Evidence from a more recent longitudinal study also provides an important qualification. A one-year study of 1,296 Chinese adolescents found that gaming disorder symptoms were longitudinally associated with subsequent increases in aggression at the within-person level, while hyperactivity/inattention symptoms partly explained the relationship at the between-person level. Such findings suggest that the relationship between problematic gaming and aggression may involve developmental and behavioral pathways that cannot be fully captured by a single cross-sectional correlation.

The present findings therefore have implications for schools, parents, and students. Preventive efforts should not focus solely on reducing the amount of gaming but should also promote healthy gaming routines, emotional regulation, responsible digital communication, and awareness of toxic communication in online environments. Schools can incorporate digital citizenship and socio-emotional learning into student guidance programs, while parents can establish reasonable gaming routines and encourage communication about students' online

experiences. Such approaches are consistent with the WHO recommendation to strengthen digital literacy, healthy online behaviors, and open communication around adolescents' digital activities.

Nevertheless, several limitations should be considered. First, the sample consisted of only 92 students from one junior high school, which limits the generalizability of the findings to other schools and adolescent populations. Second, both variables were measured through self-report instruments, which may be influenced by recall and social-desirability biases. Third, the cross-sectional design does not allow temporal or causal relationships to be established. Future research should therefore employ larger and more diverse samples and, where possible, longitudinal or experimental designs. Future studies may also examine potential moderating or mediating variables such as emotion regulation, peer influence, game genre, gaming motives, parental monitoring, and problematic gaming symptoms.

Overall, the findings provide empirical evidence that online game use intensity is positively and significantly associated with verbal aggression among junior high school students at SMPN 17 Mataram. The results are broadly consistent with recent studies conducted among adolescents and junior high school students. At the same time, the association should be understood as one component of a multifactorial process in which individual, interpersonal, and digital-environmental factors may interact.

CONCLUSION

Based on the statistical analysis, this study concludes that there is a positive and statistically significant relationship between online game use intensity and verbal aggressive behavior among eighth-grade students at SMPN 17 Mataram during the 2025/2026 academic year ($r = 0.208$, $p < 0.05$). The positive correlation indicates that higher intensity of online game use tends to be associated with higher levels of verbal aggressive behavior among students. However, the relatively low correlation coefficient suggests that the relationship is weak, indicating that verbal aggression is likely influenced by multiple factors beyond online game use.

These findings highlight the importance of collaborative efforts between schools and families in promoting healthy digital behavior among adolescents. School counselors can develop psychoeducational and preventive programs focusing on responsible digital media use, emotional regulation, and constructive communication. Parents are also encouraged to provide appropriate supervision and establish balanced rules regarding online gaming at home. Further research should examine other individual, family, peer, and environmental factors that may contribute to verbal aggressive behavior among adolescents.

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