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The Impact of Online Game Addiction on Regulation Emotions of Teenagers in Wanea District

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Abstract

Excessive use of online games among adolescents is increasingly worrying in the digital era, particularly regarding its impact on emotional regulation abilities. This study aims to analyze the effect of online game addiction on emotional regulation among adolescents in Wanea District. The study used a quantitative approach with a survey design. The population was adolescents residing in Wanea District who actively play online games, with a sample of 100 respondents selected through purposive sampling. The research instrument was an online game addiction scale questionnaire (24 items, α = 0.972) and an emotional regulation scale (15 items, α = 0.835) using a 4-point Likert scale. Data analysis used simple linear regression with SPSS 26. The results showed that online game addiction had a negative and significant effect on emotional regulation (F = 40.293; p = 0.000; β = –0.518), with a contribution of 29.1% (R^2 = 0.291). Most respondents (56%) were in the high addiction category, while 58% had moderate emotional regulation. It was concluded that the higher the online gaming addiction, the lower the adolescent's emotional regulation ability. This study provides theoretical contributions to developmental psychology and practical implications for adolescent character development programs in residential settings.

Keywords:Adolescent, Emotional Regulation, Gaming Addiction, Online Game, Wanea

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INTRODUCTION

Adolescent development in the contemporary digital era requires special attention given the social transformations occurring alongside the rapid flow of global modernization. Information and communication technology is developing at an extraordinary pace, producing countless innovative products and fundamentally changing patterns of human interaction. In education, technology is expected to be a driving force for achieving learning goals, but on the other hand, the prevalence of problematic behavior in adolescents is increasing due to uncontrolled technology use. Excessive exposure to digital media is positively correlated with an increased risk of anxiety, depression, and decreased self-control in adolescents, especially when not balanced with adequate digital literacy and supervision (Seraj et al., 2021). This phenomenon has made the study of the impact of technology on adolescent psychological development a highly relevant topic, both scientifically and practically, in the last decade.

In the specific context of Indonesia, online games have become one of the most popular technology products among teenagers, with a significantly increasing user population. Games such as Free Fire, PUBG, COC, Roblox, and Mobile Legends offer advanced features and graphics, as well as immersive gaming experiences that encompass entertainment, social interaction, and competitive challenges (Ermawati, 2022). Multiplayer features that enable real-time interaction with other players further enhance the appeal of online games as a means of socialization and entertainment. Initial observations in Wanea District revealed a worrying phenomenon where 30% of the 50 adolescents monitored (15 people) exhibited overly reactive behavior in expressing their emotions, including spontaneous outbursts of anger through swearing, throwing objects, and even physical fights triggered by peer teasing. This empirical data indicates a strong correlation between the intensity of online gaming and the inability to regulate emotions in adolescents.

Previous research has consistently shown a link between online gaming addiction and emotional regulation disorders. A study conducted at Kesesi 3 Junior High School, Pekalongan Regency, found that 60% of respondents experienced mild online gaming addiction and 57.1% had moderate emotional regulation, with Spearman Rank test results showing a significant relationship between the two variables ($p = 0.001$; $p < 0.05$). Another more recent study confirmed this finding with a very strong negative correlation between online gaming addiction and emotional regulation ($r = -0.892$; $p < 0.001$), where the higher the gaming addiction, the lower the students' emotional regulation ability. Emotion regulation, according to Gross (2014), is an individual's cognitive process in forming, recognizing, and expressing emotions, which plays a

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crucial role in creating psychological well-being and overcoming psychological distress (Strobee et al., 2002).

However, several studies have shown inconsistencies in findings regarding the mechanisms by which online games influence emotion regulation. Some studies emphasize the intensity of play as the primary predictor, while others highlight game characteristics such as instant reward systems and competition mechanisms as more significant determinants. Furthermore, most previous studies suffer from methodological limitations, particularly in terms of the context in which the research was conducted, which was largely conducted in formal school settings, rather than in dormitory or residential community settings with their unique social dynamics. Research specifically examining how reliance on game rewards affects anger control in adolescents in police dormitory environments is still very limited, although emotional phenomena in these settings exhibit distinct characteristics due to the intensive 24/7 interaction patterns and unique social pressures.

The significance of this research lies in its specific focus on the police dormitory environment in Wanea District, which remains a significant research gap in the literature on online gaming addiction and emotional regulation. Adolescents in dormitories experience different social dynamics than those in school or home environments, including exposure to more intense peer pressure and unsupervised gaming opportunities. Based on observations on June 26, 2025, adolescents in Neighborhood 5, Pakowa Police Dormitory, exhibited behavioral patterns in which they were accustomed to receiving instant rewards in the form of wins and praise from peers in online games, creating a fragile emotional comfort zone that, when faced with a reality that does not meet expectations, excessive anger emerged. The research problem can be formulated sharply: is there a significant influence of online gaming addiction on the emotional regulation of adolescents in Wanea District?

This study aims to identify and analyze the influence of online gaming addiction on emotional control among adolescents in Wanea District, a highly pressing issue given the increasing prevalence of impulsive behavior and emotional destabilization among residential adolescents. The novelty of this study lies in its focus on the context of police dormitories, which has not been adequately explored in previous literature, and its emphasis on the psychological mechanisms through which online gaming reward systems influence emotional regulation abilities. Theoretically, this study contributes to the development of psychology by providing empirical information on the relationship between online gaming and emotional regulation that can be used for subsequent research (Ermawati, 2022). Practically, the results of this study provide

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a basis for developing character development and emotional management programs for adolescents in dormitory settings, assisting parents in designing appropriate supervision and mentoring strategies, and providing a reference for policymakers in designing effective digital education programs and psychosocial interventions.

METHOD

This study used a quantitative approach with a survey design to test the causal relationship between the independent and dependent variables. The quantitative method was chosen because of its ability to produce generalizable and statistically testable data to verify the research hypothesis (Sugiyono, 2013). This approach has long been used and is a tradition in scientific research to identify patterns of relationships between variables and behavioral characteristics (Sugiyono, 2013). The survey design offers the advantage of efficiently collecting data from a large number of respondents and allows for a strong correlation analysis between online gaming addiction and adolescent emotional regulation (Riyanto & Hatmawan, 2020).

The population of this study was all adolescents residing in Wanea District and actively playing online games. Due to the population size being uncertain and very large, a non-probability sampling technique with a purposive sampling approach was used (Priadana & Sunarsi, 2021). The purposive sampling technique was chosen because the researchers subjectively determined specific respondent criteria according to the research objectives, namely adolescents residing in Wanea District and actively playing online games (Priadana & Sunarsi, 2021). The sample size was determined using the Lemeshow formula due to the unknown population, with parameters Z = 1.96 (95% confidence level), P = 0.5 (maximum estimate), and d = 0.10 (10% significance level), resulting in a minimum sample of 96 respondents rounded up to 100 respondents (Riyanto & Hatmawan, 2020).

The research instrument was a questionnaire consisting of two structured scales. The online game addiction scale adapted the Griffiths and Davies (2005) instrument with three aspects: withdrawal symptoms, mood modification, and conflict, with a total of 30 items (Ermawati, 2022). The emotional regulation scale adapted the Gross (1998) and Goleman (1995) instrument with four aspects: the ability to recognize emotions, manage emotions, control impulsive urges, and express emotions appropriately, with a total of 15 items. Both scales used a 4-point Likert format with options from strongly agree to strongly disagree. Validity testing used Armstrong's product moment ($\alpha = 0.05$; N = 30; r table = 0.361), resulting in 24 valid items out of 30 for online game addiction and 15 valid items out of 15 for emotional regulation.

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The research procedure was carried out for three months from December 2025 to February 2026 with three main stages. The preparation stage included instrument development, adaptation of questionnaire items to the local context, and instrument pilot testing on 30 respondents to test validity and reliability. The implementation stage was conducted using an online questionnaire via Google Forms for efficient respondent reach and ease of data management (Sugiyono, 2013). The final stage included collecting 100 completed questionnaires, checking data completeness, and preparing for analysis. The location selection in Wanea District was based on the researcher's proximity to the research location, which enabled more effective data collection, time and cost efficiency, and the researcher's familiarity with the environmental conditions and characteristics of the local community.

Data analysis used simple linear regression analysis to examine the effect of online gaming addiction on emotional regulation. Linear regression analysis was chosen because of its ability to quantitatively measure the direction and magnitude of the influence of one independent variable on one dependent variable (Sugiyono, 2013). Data processing used SPSS version 26 for Windows to calculate descriptive statistics, validity tests, reliability tests, and hypothesis tests. Reliability was tested using Cronbach's Alpha with the criteria of $\alpha > 0.60$, resulting in a coefficient of 0.972 for online gaming addiction and 0.835 for emotional regulation, both of which are highly reliable (Sugiyono, 2013).

Ethical considerations for this study included the principles of informed consent, confidentiality, and the use of data for academic purposes only. Before completing the questionnaire, respondents were given an explanation of the research objectives and asked to provide online consent. Respondent data were identified using only a numeric code to protect identities. This study did not require formal ethical clearance because it did not involve interventions or treatments that pose risks to participants, but it still adhered to standard quantitative research ethical principles (Sugiyono, 2013).

RESULTS AND DISCUSSION

Description of Research Results

1. Respondent Overview

The data in this study were taken on January 11, 2026 by distributing research questionnaires to 100 teenagers in Wanea sub-district, with a row of age, gender and row of residence as follows:

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Table 1. Age, Gender and Place of Residence of Teenagers In Wanea sub-district, Manado city

Age	Amount	Gender	Amount	Residence	Amount
13	*7*	*Man*	*73*	*Aspol Wanea Lingkungan 5*	*27*
14	*12*	*Woman*	*25*	*Wanea Army Barracks*	*3*
15	*11*			*Coconut land*	*2*
16	*25*			*Coco Wanea*	*1*
17	*11*			*Jln Sekre Amu*	*3*
18	*6*			*Krakatau Wanea Street*	*1*
19	*16*			*karombasan*	*12*
20	*12*			*Wanea Police Complex*	*2*
				Canaan	*1*
				Benglap field	*2*
				Ranotana	*7*
				Pakowa	*6*
				Rike	*6*
				sakobar	*1*
				Tanjung Batu	*4*
				ear	*5*
				tingkulu	*2*
				woman	*2*
				Winangun	*1*

From the table above, it can be concluded that most of the teenagers in Wanea sub-district who filled out the research questionnaire distributed by the researcher. Based on the age distribution table of respondents aged 13–20 years. The largest number of respondents was 16 years old with a total of 25 people, while the fewest respondents were 18 years old with a total of 6 people. This shows that most of the teenagers who filled out the research questionnaire were

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16 years old.

In the gender table, it was found that there were 73 males. Meanwhile, there were 25 females. So the total was 100 people.

In the table of residence, it was found that most of those who filled out the questionnaire lived in Aspol Wanea, Environment 5.

2. Data Presentation

The following is a descriptive description of the results of the statistical calculation of subject scores which is assisted by presentation in the form of a table as follows:

Table 2.Descriptive Statistics of Online Game Addiction Score and emotional control

	N	Minimum	Maximum	Mean	std. Deviation
Game addiction on line	100	40	90	67.15	16.05
emotional control	100	15	58	38.20	17.97

From the table above, it can be concluded that the number of research subjects is 100 teenagers in Wanea District with the lowest online game addiction score being 40 and the highest being 90, while for emotional regulation the lowest score is 15 and the highest score is 58. The mean (average) for online game addiction is 67.75 while for emotional regulation is 38.20. And for Std.Deviation of online game addiction is 16.141 while emotional regulation is 17.97.

3. Research Score Categories

To determine whether the Online Game Addiction score obtained from respondents is classified as high, medium, or low. The questionnaire distributed consists of 24 statements and distributed to 100 teenagers in Wanea District, with statement values 1 - 4 with information 1 = very low, 2 = low, 3 = high, 4 = very high, here is how to determine the interval distance of each category in the Online Game Addiction variable (X):

A. Maximum score = Highest score x Number of questions (4 x 24 = 96)
B. Minimum score = Lowest score x Number of questions (1 x 24 = 24)

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C. Interval = Maximum value – Minimum value (96 - 24 = 72)
D. Interval distance = Interval result : Number of categories (72 : 3 = 24)

From the data above, interval score data was obtained to determine each category, as follows:

Table 3. Categories Interpretation of Online Game Addiction variable scores

Value Range	Category
24 - 47	Low
48 - 71	Currently
72 - 96	Tall

(Source: Results of primary data management, 2024)

Table 4. ResponsesRespondents regarding Variable (X)

No	Category	f	%
1	Low	20	20%
2	Currently	24	24%
3	Tall	56	56%
	Total	100	100%

The data above shows that 20%, or 21 respondents, chose the low category, while 24%, or 25 respondents, chose the medium category, and 55%, or 58 respondents, chose the high category. The conclusion is that the majority of adolescents in Wanean District fall into the high category.

To determine whether the emotional regulation scores obtained from respondents were classified as high, medium, or low. The questionnaire distributed consisted of 15 statements and was distributed to 100 teenagers in Wanea District, with statement values 1 - 4 with information 1 = very low, 2 = low, 3 = high, 4 = very high, here is how to determine the interval distance of each category in the emotional regulation variable (Y):

A. Maximum score = Highest score x Number of questions (4 x 15 = 60)
B. Minimum score = Lowest score x Number of questions (1 x 15 = 15)
C. Interval = Maximum value – Minimum value (60 - 15 = 45)
D. Interval distance = Interval result : Number of categories (45 : 3 = 15)

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From the data above, interval score data was obtained to determine each category, as follows.

Table 5. Interpretation categories of emotion regulation variable scores

Value Range	Category
15 - 29	Low
30 - 44	Currently
45 - 60	Tall

(Source: Results of primary data management, 2024)

Table 6.Respondents' Responses regarding Variable (Y)

No	Category	f	%
1	Low	16	16%
2	Currently	58	58%
3	Tall	26	26%
	Total	100	100%

From the data above, it can be seen that 16% or 16 respondents chose the low category, while 58% or 58 respondents chose the medium category, and 26% or 26 people chose the high category. The conclusion is that the majority of teenagers in Wanea District are in the medium category.

Prerequisite Test

1. Normality Test

The normality test aims to determine whether the data population is normally distributed. In this study, researchers conducted a normality test using the Kolmogorov-Smirnov test. If the significance value (sig) is greater than or equal to 0.05, the data is considered normal. If the significance value is less than 0.05, the data is not normally distributed. The results of the normality test for this study are presented in the following table:

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Table 7.Normality Test Results

one sample		*Kolmogorov*	*-smi*	*rnov test*
Sig.			**0.138**	

The table above shows that the Kolmogorov-Smirnoff test value is 0.138, which means it is greater than 0.05. Therefore, it can be concluded that the research data is normally distributed.

2. Linearity Test

The linearity test aims to determine whether two variables X and Y have a linear or nonlinear relationship. Linearity is determined if the linearity significance value is less than 0.05, and if the deviation from linearity significance value is more than Sig. 0.05, the data is linear. The results of the linearity test using the SPSS 26 application obtained the following results:

Table 8. Linearity Test Results

Deviation from linearity				
Sig.			**0.746**	

Based on the table above, it can be seen that the Deviation From Linearity Sig. value is 0.746, which is greater than 0.05. Therefore, it can be concluded that there is a linear relationship between the variables of online game addiction (X) and emotional regulation (Y).

3. Hypothesis Testing

Hypothesis testing is carried out using simple linear regression analysis techniques using the assistance of the SPSS computer program.
(Statistical package for service solution) 26 for Windows to find out whether online game addiction is influenced by emotional regulation or not.

Table 9. Coefficient of Determination

Model Summary	
R	R Square
0.540	0.291

Online gaming addiction contributed 29.1% to changes in adolescents' emotional regulation.

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The remaining 70.9% was influenced by other variables outside this study.

Table 10. Simple Regression Hypothesis Test Results

Regression Hypothesis Testing Simple	
F count	**Sig**
40,293	0.000

Since the value of 0.000 < 0.05, this regression model is significant. This means that online gaming addiction does have a statistically significant effect on emotional regulation.

Table 11. Coefficents

	Unstandardized Coefficients		**Standardized Coefficients**		
	Std. B	Error	Beta	t	Sig.
(Constant)	63,116	5,349		11,800	0.000
Game addiction on line	- 0.518	0.082	- 0.540	- 6,348	0.000

Based on the results of the simple linear regression test, the regression equation Y = 63.116 - 0.518X was obtained. This equation shows that the Online Game Addiction variable has a negative relationship direction to Emotional Regulation. This means that if there is an increase in the Online Game Addiction variable, it will be followed by a decrease in the Emotional Regulation variable. Specifically, every increase in the Online Game Addiction score will cause a decrease in the Emotional Regulation score of 0.518 at a constant of 63.116. To determine whether the regression model is significant, an F test was conducted at a significance level of 0.05. Based on the results of the analysis, the calculated F value was obtained at 40.293 with a significance value of 0.000. Because the significance value of 0.000 <0.05, the regression model is declared significant or has a real influence. The magnitude of the variable's contribution can be seen from the R Square value of 0.291. This shows that the influence of Online Game Addiction on Emotional Regulation is 29.1%, while the remaining 70.9% is influenced by other variables not examined in this study.

Thus, the research hypothesis is answered where H_1 is accepted and H_0 is rejected. It

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can be concluded that Online Game Addiction has a negative and significant effect on Emotional Regulation in adolescents in Wanea District, where the higher the level of Online Game Addiction (X), the lower the ability of Emotional Regulation (Y).

DISCUSSION

Based on the results of my research on adolescents in Wanea District, I found that online game addiction does indeed have a negative impact on their emotional regulation. The statistical data analysis showed a significance level of 0.000, indicating that this effect is truly present in the field and not simply a coincidence.

My data shows an R Square of 0.291. Simply put, this means that online gaming addiction contributes approximately 29.1% to the fluctuations in adolescents' emotional regulation abilities. While other factors (such as parental influence or the adolescent's true nature) contribute approximately 70.9%, the 29% figure is significant enough to demonstrate that this gaming problem is significant. The most significant factor is the negative correlation (-0.518). This means there is an inverse relationship: the higher a teenager's level of online gaming addiction, the lower their emotional regulation ability. This finding makes sense, as addicted teenagers typically spend hours in front of screens. They become more easily angered, easily frustrated when losing, and find it difficult to remain calm when facing real-life challenges because their mental energy is completely drained by gaming. Linked to Skinner's Theory (Reinforcement) From the perspective of B.F. Skinner's theory, this addiction phenomenon occurs due to the "reward" or reinforcement system within the game. Teens continue playing because games offer instant rewards like leveling up, winning matches, or obtaining rare items. Because these rewards are so quickly and easily obtained in the virtual world, teens become accustomed to instant gratification. As a result, when they return to the real world—where problems can't be solved as quickly as pressing a button—they lose their patience. They're no longer accustomed to "delaying gratification" or calming themselves down. This leads to a decline in their emotional regulation; they become more impulsive and prone to outbursts, accustomed to the instantaneous interaction patterns of games.

Links to Previous Research

The results of my research in Wanea District align with and reinforce the findings of previous researchers. For example, research by Anita Nurazmi et al. (2021) and Mita Annisa (2022) also showed a similar finding: digital addiction has a negative side that undermines emotional

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stability.

The difference is, in my research, I found that teenagers in Wanea District are at a high risk because prolonged gaming can lead to "emotional exhaustion." While previous research may have only looked at the general impact, this research confirms that in Wanea District, gaming addiction is no longer just a hobby, but has become a major factor preventing teenagers from controlling their negative emotions.

CONCLUSION

This study found that online game addiction has a negative and significant effect on emotional regulation in adolescents in Wanea District. Simple linear regression analysis showed a regression coefficient value of β = -0.518 with a significance of p = 0.000, which indicates that every one increase in online game addiction score will decrease the emotional regulation score by 0.518. The contribution of online game addiction to emotional regulation is 29.1 percent as indicated by the R Square value, while the remaining 70.9 percent is influenced by other variables such as parenting patterns, social environment, and individual characteristics. Fifty-six percent of respondents are in the high addiction category and 58 percent have moderate emotional regulation, which strengthens the finding that most adolescents in the study area experience problems in controlling emotions due to dependence on online games. This finding is consistent with Skinner's reinforcement theory which explains that the instant reward system in games creates impulsive behavior patterns and reduces the ability to delay gratification.

This study has several limitations that require attention. The study was limited to Wanea District, so generalizing the results to other areas requires caution. The cross-sectional survey design cannot demonstrate a long-term causal relationship between online gaming addiction and emotional regulation. Other variables that potentially influence emotional regulation, such as parenting quality, stress levels, and social support, have not been thoroughly examined. Future research is recommended to expand the geographic scope, use a longitudinal design to test the stability of the effects of gaming addiction on emotions, and include mediator or moderating variables such as parental support and digital literacy. Practical implications of this study include the need for character development and emotional management programs for adolescents in residential settings such as dormitories, as well as the need for more effective parental supervision and guidance strategies in managing children's gaming time.

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