

The Impact of Online Game Addiction and Transformations of Emotional Intelligence and Intellectual Intelligence in Middle Adolescents

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ABSTRACT

Adolescence is a critical maturity stage characterized by physical, cognitive, and emotional changes. Rapid growth, identity conflicts, and interest in counterparts affect their development. Widespread addiction to online games could damage emotional and intellectual intelligence. Negative impacts comprise mental health disorders, lowered academic performance, and impairments in social interaction and self-regulation. The study aimed to determine the relationship between online game addiction and emotional and intellectual intelligence transformations in middle adolescents at SMKN 1 Banyudono. This quantitative study employed a cross-sectional design. The sample selected a total sampling technique with a sample size of 51 respondents. The instrument utilized Game Addiction Scale (GAS) questionnaires, as well as questionnaires for emotional and intellectual intelligence. Data were analyzed using rank-spearman's test and regression test. The bivariate analysis using rank-spearman's test obtained a p-value of 0.000 (p-value <0.05). The results indicated a significant relationship between online game addiction and differences in emotional intelligence. A p-value of 0.000 (p-value <0.05) inferred a consequential relationship between online game addiction and differences in intellectual intelligence. The results of multivariate analysis using the regression test obtained a p-value of 0.000 (p-value <0.05). Therefore, it concluded that there was an impact between online game addiction and transformations in emotional and intellectual intelligence in middle adolescents.

Keywords: Online Game Addiction, Emotional Intelligence, Intellectual Intelligence

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1. INTRODUCTION

Adolescence is a process towards adulthood. Adolescents are divided into three stages of development including the early stage, middle stage and late stage [23]. During the development and growth of adolescents there will be many health problems that occur which start from risky behavior. Because of the many changes that occur in a teenager's body, the hormone cortisol in the body can increase, which will result in an abnormal emotional condition [40].

Prevalence The World Health Organization (WHO) explains that an estimated 1 in 7 children (14%) aged 10-19 years experience mental health disorders [41]. According to Riskesdas in 2018, more than 19 million Indonesians aged over 15 years experience mental emotional disorders, and more than 12 million residents aged 15 years and over experience depression [31]. According to Maifasari et al. as many as 36.1% of teenagers experience abnormal emotional mental conditions [20].

One of the causes of mental disorders in teenagers is online games. The number of online game players in 2020 is predicted to increase from 23.7 million people in 2019 to 28.1 million in 2020 [30]. The Philippines is in first place in the world with a percentage of internet users playing video games of 96.4% while Indonesia is in third place with the highest number of gamers in the world with a percentage of 94.5%. In Indonesia alone, 10 children in Banyumas were diagnosed with mental disorders due to addiction to online games and had to receive therapy at the Banyumas District Hospital [24]. The majority are dominated by ages 16-64 years as much as 83.6%, and 68.1% of internet users use smartphones to play games [16]. Meanwhile, according to Trimawati, judging from esports data (a game competition) around 58% or 12,876,174 people came from young people under 18 years of age [37].

According to the Central Statistics Agency (BPS), the largest online game users are in Central Java, reaching 18% of the total teenagers in Central Java [10]. According to Murniati et al., online game users in Central Java are

26.5 million users. In Central Java itself, the city with the most use of online games is Solo, which reaches 10% of the total number of teenagers [22].

Online games can have a positive impact on users as players can analyze their abilities, and have fast, accurate and direct abilities at all times [39]. Online games can also be used as a means of learning, for example as a means of finding out more about internet technology, interacting with other people, and learning or polishing English [24].

The use of online games will lead to addiction or addiction, which is a disorder that is repeated to satisfy oneself in certain activities. Adolescence, which is in a period of instability, tends to be more easily involved in trying new things [2]. Adolescence is also closely related to the stereotype of a problematic period. As a result, teenagers who are addicted to online games tend to be less interested in other activities, feeling anxious when they cannot play online games [24].

Online game addiction will occur due to dysfunction of the neurotransmitter system, especially dopamine. When Dopamine is finished, it should be taken back up by the Active Dopamine Transporter molecule, but when someone experiences addiction, the Active Dopamine Transporter system will be disrupted, so that hormones related to addiction will increase [2]. When the brain starts playing games, it will continue to think about it so that several symptoms will appear such as withdrawal, anxiety, sadness, lack of emotional control, and excessive use which will affect emotional intelligence and intellectual intelligence [19].

If used for a long time, using online games will cause health problems [8]. Thus, their social relationships and interactions with family, friends and those around them become less good and they are unable to gain knowledge or experience a decline in academic knowledge [30].

Online game addicts usually spend a long time disrupting learning patterns, memory problems and changes in concentration so that their intellectual intelligence is disrupted [37]. Basically, intellectual intelligence is very important for teenagers, especially solving problems logically and with other strategic thoughts [8].

Addiction to online games can also have a negative impact on physical, mental and social health. The negative impact of online game addiction is mental health, depression, social anxiety and physical damage [37]. The effects on the social environment result in decreased expression, emotional control, reduced attention (focusing attention), inhibition (limiting), this causes online game addicts to experience a decrease in emotional intelligence [20]. Emotional intelligence is very important, especially for teenagers, because high emotional intelligence tends to have emotional abilities that can help them deal with daily problems and tend not to harm themselves or others [34].

The results of the preliminary study on December 4th 2023 at SMKN 1 Banyudono were 71 students in class 10 TKJ for the 2023/2024 academic year. Researchers conducted interviews and observed 10 students who played online games. Based on the results of interviews with 10 students, it was found that they played online games because they wanted to have fun and fill their free time. Usually, they play online games for around 4-5 hours a day. Students said the majority of students played Mobile Legends. In addition, some students said they experienced emotional changes when playing online games and found it difficult to control their emotions. Students also said that it was difficult to hone their soft skills, especially in expressing their ideas, opinions and creativity because they were afraid that their ideas would not be accepted by other friends. Students also said that their memory had decreased since playing online games.

Based on this description, researchers are interested in conducting research entitled the relationship between online game addiction and changes in emotional intelligence and intellectual intelligence in middle adolescents at SMKN 1 Banyudono.

2. METHOD

This research uses quantitative research and uses a cross-sectional approach design. A cross-sectional design is a research design that studies risks and effects by observation, and the aim is to collect data simultaneously and at one time [1]. The cross-sectional design in this study studied online game addiction with changes in emotional intelligence and intellectual intelligence.

The study population comprised 71 10th grade students from TKJ SMKN 1 Banyudono. The sample selection in this study used total sampling technique. With the following inclusion criteria: 1) Willing to be a respondent; 2) 10th grade students from TKJ SMKN 1 Banyudono; 3) Playing online games >3 hours/day; 4) Aged 15-18 years. As well as the exclusion criteria, namely not being able to take part in the research (permission, illness, leave).

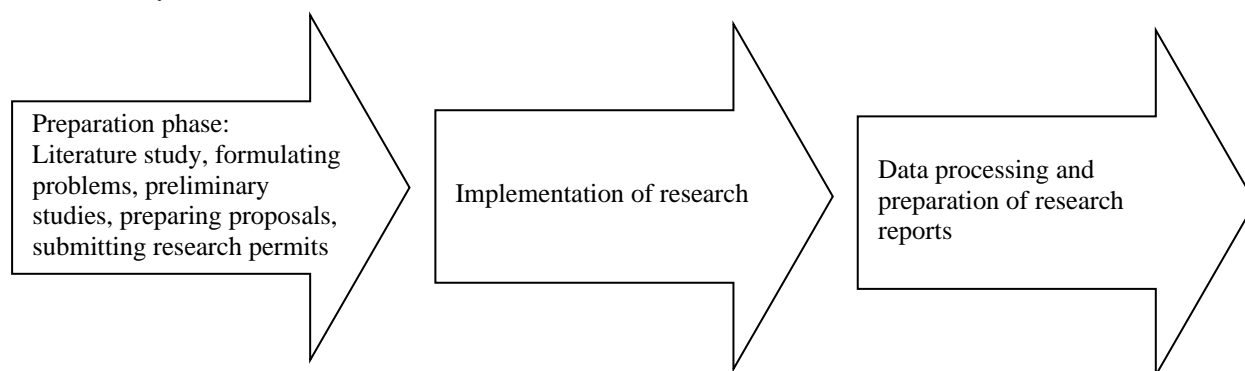
This research used a total sampling technique, which means the entire population was used as the research sample [14]. The population in this research was 71 students. However, there were only 51 students who were included in the inclusion criteria, 17 other students were not online game users, and 3 other students were online game users but the duration of playing per day was <3 hours.

This research was conducted at SMKN 1 Banyudono and carried out on March 7th 2024. Using measuring instruments in the form of observation sheets, Game Addiction Scale (GAS) which has been declared valid with the results of the validity test r calculated $> r$ table with a calculated r value of 0.319-0.804 and obtained a Cronbach's Alpha value of 0.915, emotional intelligence questionnaire which has been declared valid with the results of the validity test r calculated $> r$ table with a calculated r value of 0.315-0.755 and obtained a Cronbach's Alpha value of 0.954, and intellectual intelligence questionnaire which has been declared valid with the results of the validity test r

calculated > r table with a calculated r value of 0.303-0.454 and obtained a Cronbach's Alpha value of 0.805 [21][33][13].

Researchers used the rank-spearman's test for bivariate analysis. In this study, bivariate analysis was carried out twice. The first bivariate analysis was used to determine the relationship between online game addiction and changes in emotional intelligence in middle stage adolescents at SMKN 1 Banyudono. Meanwhile, the second bivariate analysis was used to determine the relationship between online game addiction and changes in intellectual intelligence in middle-stage adolescents at SMKN 1 Banyudono.

Researchers used the logistic regression test for multivariate analysis. In this study, multi-variate analysis was used to determine the relationship between the three variables, namely to determine the relationship between online game addiction and changes in emotional intelligence and intellectual intelligence in middle stage adolescents at SMKN 1 Banyudono [15].



Graph 1. Research Timeline

3. RESULTS AND DISCUSSION

3.1. Univariate Analysis

Table 1. Characteristics of Respondents Based on Age (n=51)

Age	Frequency (F)	Percentage (%)
15 years	21	41,2 %
16 years	28	54,9 %
17 years	2	3,9 %
Total	51	100%

Based on table 1, the results showed that the majority of respondents were 16 years old, namely 28 respondents (54%). This age is the middle stage of adolescence. Based on research conducted by Ani'mah, the majority of online game users are 16 years old with a mean score of 16.03 [7]. This research is also in line with research conducted by Siagian, the majority of respondents were 15 years old, 33 respondents (37.15%), which means they are included in the middle stage of adolescence [32]. Apart from that, this research is also in line with research conducted by Ahmad et al., where the respondents were middle stage teenagers and the majority were 15 years old, numbering 42 respondents (55.3%) [2].

Middle adolescence is characterized by the development of new thinking abilities, so that society's interest and role in becoming independent adults begins to appear [23]. Compared to adults, teenagers are considered more common and more likely to become addicted to online games. Adolescence is in an unstable state which leads to a tendency to experiment and become curious about new things [11].

Teenagers are more interested in playing online games and as this interest grows, teenagers will spend more and more time playing these games, thus causing teenagers to become addicted to online games [3]. Adolescents who are addicted to online games will experience a condition where they become less interested in other activities and feel restless or restless when they cannot play online games. Apart from that, several symptoms will appear such as withdrawal, decreased concentration and interest in learning, lack of emotional control which will affect intelligence. emotional and intellectual intelligence [19].

According to the researcher's opinion, the average age of respondents falls into the middle teenage category. Currently, many teenagers use smartphones to play online games which make them addicted, resulting in addiction.

Table 2. Characteristics of Respondents Based on Gender (n=51)

Gender	Frequency (F)	Percentage (%)
Male	35	68,6 %
Female	16	31,4 %
Total	51	100 %

Based on table 2, the results show that men are more numerous, with 35 respondents (68.6%). Based on research conducted by Siagian, the results obtained were that the majority of respondents were male, 49 respondents (55.1%) [29]. This is in line with research conducted by Ani'mah, which showed that the majority of respondents were male, namely 45 respondents (62.5%) [7]. Apart from that, this is also in line with research conducted by Ahmad et al., where men are more likely to experience online game addiction than women, numbering 42 respondents (55.3%) [3].

According to Nuzuli et al., men are more likely to choose online games because they have varying levels of difficulty, there are elements of violence in the game and can be played together with different friends, while women are more likely to choose games with easy characteristics [25]. According to Irawan, boys are more easily addicted to games and spend a lot of time in game rentals compared to girls [17].

Additionally, men tend to have higher levels of impulsivity than women, which may make men more susceptible to addiction in the context of online games that offer instant rewards and powerful stimuli [3]. Differences in interests and activities can influence this, where men are more interested in certain types of games which tend to be more attractive to men compared to women [29].

According to researchers' assumptions, men are more likely to become addicted because of differences in interests between men and women. Online games are more attractive to men because of the challenges or variations in levels of difficulty in online games.

Table 3. Frequency Distribution Based on Level of Online Game Addiction (n=51)

Level of Online Game Addiction	Frequency (F)	Percentage (%)
Mild	29	56,9 %
Medium	22	43,1 %
Total	51	100 %

Based on table 3, it shows that the majority of respondents have a mild level of online game addiction, 29 respondents (56.9%). Based on research conducted by Rangkuti et al., it was stated that the majority of online game addiction tendencies were in the mild category, 790 respondents (72.21%) [30]. This is in line with research conducted by Muhammad, which stated that 27 respondents (67.5%) were addicted to online games with low criteria [21]. Apart from that, this is also in line with research conducted by Pratama et al., showing that the majority of respondents were in the mild category, 62 respondents (47.7%) [27].

Online game addiction is when someone wants to play online games continuously, spends a lot of time, and cannot control or control it [24]. Addiction to online games also influences children's interest in learning to decrease emotionally. Apart from that, psychomotor activities can also have an impact on children's physical health, such as eye strain and lack of social interaction in daily life [4].

Teenagers prefer to play online games for several reasons, including looking for fun, relieving stress, escaping from real life [30]. The intensity or length of time playing online games can affect a teenager's emotional intelligence, factors that cause an increase in the level of playing online games will make teenagers feel curious to continue playing at a more difficult level with new challenges [24].

According to Adam et al., compared to adults, teenagers use online games more often and more easily, because teenagers who are in a period of instability tend to be more easily involved in trying new things [2]. Playing too many online games will certainly have a negative impact on teenagers [5].

In the opinion of researchers, teenagers who play online games too often will make them curious. This will make teenagers even more fun and will continue to play online games without paying attention to other activities.

Table 4. Frequency Distribution Based on Level of Emotional Intelligence (n=51)

Level of Emotional Intelligence	Frequency (F)	Percentage (%)
Medium	37	72,5 %
High	14	27,5 %
Total	51	100 %

Based on table 4, it shows that the majority of respondents have a moderate level of emotional intelligence, namely 37 respondents (72.5%). Based on research conducted by Basaria, it was explained that the majority of respondents had a moderate level of emotional intelligence, 467 respondents (46.1%) [9]. This research is also in line with research conducted by Yuliana et al., the results showed that the majority of respondents had a level of

emotional intelligence in the medium category, 45 respondents (66.2%) [42]. Apart from that, this research is also in line with research conducted by Parman et al., showing that the majority of respondents have a level of emotional intelligence in the medium category with a mean value of 92.42 [26].

According to Goleman (1995) in Syarif (2023), emotional intelligence consists of perception, understanding and regulation of one's own and other people's emotions [36]. Adolescents who have good stress resistance also tend to have healthier interpersonal relationships, are able to build and maintain positive relationships with other people, and are able to handle conflict better [20].

According to Yuliana et al., Teenagers often face emotional challenges, and the intensity of playing online games can affect their mental health and perception of the surrounding environment [42]. Online game addiction has a negative impact on players' emotional intelligence, which is characterized by uncontrollable urges and loss of control [2].

In the opinion of researchers, teenagers who are addicted to online games can hinder a person's ability to manage emotions appropriately, worsen interpersonal relationships, and hinder the development of healthy communication skills.

Table 5. Frequency Distribution Based on Level of Intellectual Intelligence (n=51)

Level of Intellectual Intelligence	Frequency (F)	Percentage (%)
Medium	38	74,5 %
High	13	25,5 %
Total	51	100 %

Based on table 5, it shows that the majority of respondents have a moderate level of intellectual intelligence, namely 38 respondents (74.5%). In line with research conducted by Halawa, the majority of respondents had a moderate level of intellectual intelligence, 37 respondents (63.8%) [13]. Apart from that, this research is also in line with research conducted by Aristiani et al., which showed that the majority of respondents also had a level of intellectual intelligence in the medium category with a mean value of 92.63 [8].

Supported by research Suryaningsih et al., his research revealed that the higher a person's intellectual intelligence, the better a person's behavior [35]. According to Kamaluddin et al., intellectual intelligence functions as the ability to learn from experience, the ability to adapt to the surrounding environment and verbal abilities such as thinking using metacognitive processes [18].

Intellectual intelligence is greatly influenced by a person's verbal abilities. Adolescents who have good verbal skills tend to be better at handling verbal problems, understanding instructions, and expressing themselves clearly [36]. However, when teenagers experience addiction to online games, it can have a negative impact on teenagers' intellectual intelligence through several mechanisms, including reducing the time allocated for studying, and affecting concentration, all of which can have a negative impact on learning abilities and academic performance [14].

In the opinion of researchers, teenagers who are addicted to online games can disrupt sleep patterns, reduce the time allocated for studying, and affect concentration, all of which can have a negative impact on learning ability and academic performance.

3.2. Bivariat Analysis

Table 6. Analysis of the relationship between online game addiction and changes in emotional intelligence (n=51)

Level of Emotional Intelligence	Correlation Coefficient	Level of Online Game Addiction
		-.536
	Sig. (2-tailed)	.000
	N	51

Based on table 6, the results of Spearman's rank analysis obtained a p-value of 0.000 (p-value <0.05), with a correlation value of -0.536, indicating a negative (-) correlation direction and having a fairly strong relationship.

This research is in line with research conducted by Yuliana et al., which obtained a p-value of 0.005 (p-value <0.05) and a correlation value of -0.256 [42]. This research is also in line by Parman et al., research conducted by those who stated that online game addiction has a significant effect on emotional intelligence, as shown by the R-count > R-table value, namely 0.434 > 0.2335 [26].

Online game addiction is a condition where a person is unable to control and influence daily life so that it can have a negative impact on mental health, social relationships, and academic or work performance [38]. Online game addiction has a relationship with emotional intelligence. Where emotional intelligence consists of perception, understanding, and regulation of one's own and other people's emotions. In emotional intelligence there are four main elements, namely individual awareness, behavioral regulation, recognition of empathy and interpersonal skills [36].

Online game addiction can impact emotional intelligence. Someone who is addicted to online games tends to have difficulty identifying, controlling and expressing their emotions [12]. Because you are too focused on gaming activities, you become less sensitive to other people's feelings and emotional needs. In addition, online game addiction can also increase levels of stress, anxiety, and depression, all of which can interfere with a person's ability to understand and manage their emotions effectively [19]. Online gaming addiction also often leads to withdrawal from beneficial social interactions, which can hinder the growth of social and emotional skills. This can have a negative impact on interpersonal relationships and overall emotional well-being in the long term [26].

Teenagers' emotional intelligence is greatly influenced by their ability to withstand stress. Middle stage adolescents who have a high level of resilience tend to be better able to face everyday difficulties and pressures. They have a better ability to manage negative emotions such as anxiety, anger, and frustration, which allows them to stay focused, think clearly, and make the right decisions in difficult situations [33]. The ability to withstand stress is an important part of emotional intelligence, which includes self-awareness, emotional management, self-motivation, recognition of other people's emotions, and social relationship skills. Adolescents who have good stress resistance also tend to have healthier interpersonal relationships, are able to build and maintain positive relationships with other people, and are able to handle conflict better [20].

After the indicator of ability to withstand stress, the indicator of problem solving ability is the dominant indicator in this research. Problem solving is the process of identifying problems, analyzing existing options, and making the right decisions [34]. This process also involves teenagers to think critically and evaluate the consequences of each choice. Guiding middle stage teens through real situations and simulated problem solving can help them hone these skills [8]. After that emotional intelligence can be influenced by self-awareness, independence, interpersonal relationships, happiness, reality and flexibility, assertiveness, self-esteem, self-actualization, empathy, social responsibility, impulse control, and optimism.

In the opinion of researchers, as teenagers play online games frequently, the level of addiction will increase. The more often teenagers play online games, the more their emotional intelligence will change. The indicator that most influences emotional intelligence is the ability to withstand stress.

Table 7. Analysis of the relationship between online game addiction and changes in intellectual intelligence (n=51)

	Level of Online Game Addiction	
Level of Intellectual Intelligence	<i>Correlation Coefficient</i>	-.509
	<i>Sig. (2-tailed)</i>	.000
	N	51

Based on table 7, the results of Spearman's rank analysis obtained a p-value of 0.000 (p-value <0.05), with a correlation value of -0.509, indicating a negative (-) correlation direction and having a fairly strong relationship.

In line with research conducted by Halawa, the results of the chi square statistical test were obtained with a p-value of 0.049 [13]. In line with research conducted by Suryaningsih et al., the p-value was 0.004. The higher a person's intellectual intelligence, the better a person's behavior will be. Someone who has high intellectual intelligence will be able to align their attitudes with their behavior. Intellectual intelligence is a person's ability to solve the problems they face by considering the knowledge and experience they have previously obtained. The more and wider the knowledge one obtains, the better a person's way of thinking will be in considering the ethical actions they will take. So that people who have good intellectual intelligence will logically understand the consequences of the actions they take [35].

The intellectual intelligence of middle stage adolescents is greatly influenced by verbal abilities. Individuals who have good verbal skills tend to be better at handling verbal problems, understanding instructions, and expressing themselves clearly [8]. Strong learning abilities are often associated with this ability, especially in formal education, where reading, writing, and speaking abilities are critical to understanding lessons and participating in class discussions. A person's social and emotional intelligence can also be influenced by good verbal skills in communicating, interacting with other people, and resolving conflicts [28].

The second indicator of intellectual intelligence is the ability to calculate. Middle stage teenagers who have good numeracy skills tend to be better able to solve problems that require logical and analytical thinking [13]. Online game addiction can have a significant impact on a teenager's intellectual quotient. Time spent playing online games can reduce time that should be allocated for learning or other self-development activities. This can hinder teenagers' ability to learn and hone academic skills. Additionally, online gaming addiction often leads to a lack of adequate sleep, which can impair concentration, memory, and problem-solving abilities, all of which are important aspects of intellectual intelligence [24].

In the opinion of researchers, online game addiction can also have a negative impact on the development of intellectual intelligence in middle-stage teenagers. The most dominant indicator of intellectual intelligence is verbal ability. When verbal abilities are impaired, their ability to handle verbal problems, understand instructions, and express themselves clearly will be impaired so that their ability to achieve their academic and professional potential will decrease.

3.3. Multivariat Analysis

Table 8. Analysis of the relationship between online game addiction and changes in emotional intelligence and intellectual intelligence (n=51)

	<i>p-value</i>
Analysis of the relationship between online game addiction and changes in emotional intelligence and intellectual intelligence	0.000

Based on table 8, the results of testing the relationship between online game addiction and changes in emotional intelligence and intellectual intelligence in middle stage adolescents at SMKN 1 Banyudono using logistic regression analysis obtained a p-value of 0.000 (p-value <0.05).

In line with research conducted by Yuliana et al., a p-value of 0.005 (p-value <0.05) and a correlation value of -0.256 were obtained, which means there is a significant relationship between emotional intelligence and the intensity of playing online games with a negative correlation. which means the higher the intensity of playing online games, the lower the emotional intelligence [42]. Also in line with research conducted by Halawa, the chi square statistical test results obtained with a value of P=0.049, where this research can be concluded that there is a significant relationship between intellectual intelligence and phubbing behavior. Intellectual intelligence is the ability needed to carry out various mental activities of thinking, reasoning and solving problems. Likewise, phubbing behavior, where phubbing is a deviant act of excessive smartphone use, can cause mental health problems [13].

In this research, first indicators that most influences the level of online game addiction is mood modification. Some people use online games as a way to change their mood or to escape the stress or anxiety they experience every day [21]. However, when someone starts to depend on games to regulate their mood, they may tend to use games too much and lose control over their use. Online games also have an impact on student learning outcomes in three aspects, namely cognition, emotion and psychomotor [25].

The second most dominant indicator is relapse, a condition when someone who tries to reduce or stop playing games returns to a pattern of excessive playing which can be triggered by various factors such as stress, boredom, or feelings of loneliness [5]. The third most dominant indicator is salience, a condition where playing online games becomes the most important activity in a person's life, dominating their thoughts, feelings and behavior, resulting in decreased participation in social, educational or other work activities [40].

The fourth most dominant indicator is tolerance, a condition where teenagers who are addicted to online games will need more playing time to feel satisfied, which often leads to longer and more intense playing sessions [19]. The fifth most dominant indicator is problems, online game addiction can have an impact on quality of life such as sleep disorders or physical pain, financial problems due to in-game purchases, and psychological problems such as social isolation or low self-esteem. This accumulation of problems reinforces the cycle of addiction and makes recovery more challenging [34].

The sixth most dominant indicator is conflict, a condition where addiction to online games causes problems in social, work or academic relationships, thereby exacerbating negative feelings and increasing dependence on games as an escape [28]. The seventh indicator is withdrawal, which refers to the physical and emotional symptoms that appear when individuals stop playing games suddenly making it difficult for individuals to stop playing and often prompting them to return to gaming to relieve this discomfort [12].

In the aspect of cognition, online games can have an impact such as helping children improve their thinking abilities. Excessive online gaming activities can reduce the time students spend studying and have a negative impact on their ability to concentrate and process data [2]. Additionally, too much time spent in front of screens can lead to a lack of physical activity and social interaction, both of which are important for overall health and cognitive development. Due to game addiction, children's interest in learning decreases emotionally [4].

In the emotional aspect, online games can influence students' emotions significantly, both positively and negatively. When used excessively or uncontrollably, online games can cause emotional problems such as anxiety, depression and anger [6]. Stress and other emotional disorders can be caused by pressure to achieve game goals, losing games, or interpersonal conflict within the gaming community. In addition, students' emotional problems can be exacerbated due to limited time for social and physical activities and lack of interaction with the real world [19]. In the psychomotor aspect, psychomotor activities can also have an impact on children's physical health, such as eye strain and lack of social interaction in daily life [30]. Excessive use of online games can also cause sleep disturbances and physical fatigue, which in turn can affect students' psychomotor performance.

Online game addiction often interferes with teenagers' ability to manage their emotions, results in emotional instability, and reduces their ability to empathize and interact positively with others [38]. Factors such as social isolation and the influence of game content that triggers negative emotions such as aggression, frustration and anxiety play a role in lowering their level of emotional intelligence. On the other hand, online game addiction can also hinder teenagers' cognitive development, affecting their ability to concentrate, problem solving and creativity [24].

Time spent playing online games also reduces the time that can be allocated to activities that support intellectual development, such as reading, studying, or participating in other activities that stimulate brain development [13]. Therefore, online game addiction can have a significant impact on both emotional intelligence and intellectual intelligence of adolescents, and has the potential to have a negative impact on overall adolescent development [8].

In the opinion of researchers, online game addiction can have a complex impact on a person's intellectual and emotional intelligence. The most dominant indicator of online game addiction is mood modification. Online game addiction can hinder the development of emotional intelligence, such as the ability to understand and manage one's own and other people's emotions, as well as the ability to develop the ability to control emotions effectively. In terms of intellectual intelligence, online gaming addiction can hinder healthy cognitive development, reduce the ability to solve problems, and disrupt critical and analytical thinking patterns.

4. CONCLUSION

In conclusion, the study found an impact between online game addiction and changes in both emotional and intellectual intelligence among middle-stage adolescents at SMKN 1 Banyudono.

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