

A Study of Self-Regulation on Online Game Addiction in Kupang City

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Abstract. According to data released by the Ministry of Communication and Information through its official website in 2015, it is estimated that more than 100 million of the approximately 250 million Indonesian citizens became active smartphone users in 2018 (KOMINFO, 2015). The survey results stated that as many as 54.68%, namely 143.26 million people from the total population of Indonesia's 262 million people, were internet users. Online games continue to grow among teenagers because they can be played online via the internet. Online games are a type of computer game that utilizes a computer network (LAN or internet) as a medium (Young, 2006). This study describes the effect of self-regulation (short-term and long-term) on online game addiction in adolescents who join the E-Sport Community in Kupang City. The sampling technique used total sampling with a total sample of 488 participants and then analyzed using *Structural Equation Modeling* (SEM). This research shows that there is a significant influence between self-regulation (short-term and long-term) on online game addiction.

Keywords: *Self-regulatory, Game Online, Addiction, Adolescents*

Abstrak. Menurut data yang dirilis oleh Kementerian Komunikasi dan Informasi (Kominfo) melalui laman resminya pada tahun 2015, diperkirakan sebanyak lebih dari 100 juta dari sekitar 250 juta orang warga Indonesia menjadi pengguna aktif ponsel pintar pada tahun 2018 (KOMINFO, 2015). Hasil survei tersebut menyatakan bahwa sebanyak 54,68% yakni 143,26 juta jiwa dari total populasi penduduk Indonesia 262 juta orang, merupakan pengguna internet. Game online terus berkembang dikalangan remaja karena dapat dimainkan secara online via internet. Game online adalah jenis permainan komputer yang memanfaatkan jaringan komputer (LAN atau internet) sebagai medianya (Young, 2006). Penelitian ini menggambarkan Pengaruh Regulasi Diri (*Short-term* dan *Long-term*) terhadap Adiksi *Game Online* pada Remaja yang Bergabung dalam Komunitas E-Sport di Kota Kupang. Teknik Pengambilan sampel menggunakan total sampling dengan jumlah sampel sebanyak 488 partisipan dan selanjutnya dianalisis menggunakan *Structural Equation Modeling* (SEM). Penelitian ini menunjukkan bahwa terdapat pengaruh yang signifikan antara Regulasi Diri (*Short-term* dan *Long-term*) terhadap Adiksi *Game online*.

Kata kunci: *Regulasi diri, Game Online, Adiksi, Remaja*

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Introduction

Online games continue to increase among teenagers because they can be played online over the Internet. Online games are computer games that use a computer network (LAN or Internet) as a medium (Young, 2006). Playing online games over the Internet is popular with many people, not just children or adolescents, but also early adults into old age (Lutfiwati, 2018). Playing games is a game that can be applied to all areas, for example in education, while respecting the essence and the rules of the game. Playing games is also becoming increasingly popular because it also promises financial benefits and can be used as a professional job.

The existence of a professional player profession and many online game competitions, including esports or digital sports, are organized with special training like professional athletes (Lutfiwati, 2018). The number of players in Indonesia is currently estimated at 34 million people. Of these, 19.9 million online gamers are paid with an average spend of \$ 9.12 (Rachmawati, 2018). The phenomenon that is occurring among teenagers who are in the esports community, especially in Kupang city, is developing so fast at the moment. According to an interview conducted with Riesta Ratna Mega Sari as a secretary at PengProv ESI East Nusa Tenggara, there were 148 esports teams on December 21, 2020, with a total of 818 players from the entire team who were working professionally.

The existence of the esports community is a breath of fresh air for membership teenagers and teenagers passionate about online gaming. It is hoped that teenagers will be able to take smart steps to take advantage of the facilities provided by the team and government alike while keeping gaming behavior at a healthy level. How playing games can help improve the quality of yourself through the occupied game.

Research from the University of Oxford's Internet Institute (2010) investigated the development of someone who is addicted to playing games. The study found that 2-3 percent of the 19,000 men and women surveyed admitted that they had a psychiatric disorder. Adolescents began to be affected by mental disorders due to the effects of online game addiction, marked by teenagers who began to withdraw from the social environment and were reluctant to socialize.

Reporting from Medikastar.com, several children in Kupang City were detected to have mental disorders due to online games. This was stated by the Director of the Main Clinic of Jiwa Dewanta Mental Healthcare, dr. DAP. Sita Windari. Where he said that there were parents who came to bring their children because they were no longer able to cope with their children's behavior, where their children turned naughty, became rebellious children, and also became children who like to skip school.

Addiction to online gaming can be classified under the category of gaming disorder, a behavioral disorder that is contained in patterns of gaming (digital or video) and where individuals cannot control gaming (WHO, 2018). Game disorders can be said to mean that the person is socially and educationally disturbed in dealing with other people. People whose function is restricted for about 12 months (WHO, 2018).

Method

The method used in this study is a quantitative method through a survey with Google form. This research was conducted on teenagers aged 12 to 24 who were members of the Kupang e-sports and actively playing online games community with a sample size of are 535 people identified. In addition, the available data was passed through a data cleansing process or the process of deleting used data or not according to the criteria to obtain up to 488 passed participants. After the process has received as much data as participants passed, re-examining existing data to determine the value of the standard deviation. After the data is available, it is tested again with the

box plot in SPSS so that 488 participants are then analyzed with the logistics regression in the SPSS version 16 program.

Result

It is known from the results of the questionnaire survey that the characteristics of the respondents according to age, gender and can be seen in Table 1 and Table 2.

Table 1.

Categorization of online gambling addiction behavior by gender.

Sex	Behavioral addiction / online game addiction category					
	Do not experience online game addiction		Experienced <i>Game Online</i>		Total	%
Male	154	31,6%	41	8,4%	195	40%
Female	228	46,7%	65	13,3%	293	60%
Total	382	78,3%	106	21,7%	488	100%

Table 1 shows that there are 154 participants, or 31.6% of men, who do not have an online gambling addiction, and those who do have online gambling addiction are 41 participants or 8.4%. But for the female gender, there were 228 participants, or 78.3%, who did not have an online gambling addiction, and 65 participants, or 13.3%, had an online gambling addiction.

Based on Table 2, it is known that between the ages of 12-15 years 160 teenagers are not addicted and 39 teenagers are addicted to online gaming. There are now 116 adolescents without online gambling addiction and 35 adolescents with online gambling addiction among adolescents aged 16-19. Between the ages of 20-24, 106 teenagers are not addicted and 32 teenagers are addicted to online gaming. Therefore, it can be concluded that participants between the ages of 12 and 15 were most dependent on online gaming.

Table 2.

Categorization of Online Game Addiction Behavior by Age.

Age	Behavior category Online game addiction		Experiencing Online Game Addiction Online games		Total	%
	Do not experience online game addiction	%		%		
12-15	160	32,8 %	39	8 %	199	40,8%
16-19	116	23,8%	35	7,2%	151	30,9%
20-24	106	21,7%	32	6,6%	138	28,3%
Total	382	78,3%	106	21,7%	488	100%

a. Categorization of Self-regulation (Short Term)

Table 3.

Categorization of Self-regulation (Short term)

Categorization of Self-Regulation (<i>Short Term</i>)	Frequency	Presentation
Low	177	36,3%
Medium	260	53,2%
High	51	10,5%
Total	488	100 %

The above table shows that self-regulation (short-term) with a low level of 177 participants or 36.3%, while 260 participants or 53.2% short-term self-regulation with a moderate level and 51 participants or 10.5% a high level had short-term self-regulation. From the above data, it can be concluded that the highest short-term self-regulation is at a moderate level.

b. Categorization of Self-Regulation (Long Term)

Table 4.

Categorization of Self-Regulation (Long term)

Categorization of Self-Regulation (<i>Short Term</i>)	Frequency	Presentation
Medium	60	12,3%
High	428	87,7%
Total	488	100%

Table 4 shows that 428 participants and 87.7% had high long-term self-regulation, while 12.3% and 60 participants had moderate long-term self-regulation. Multivariate analysis of online gambling addiction, short-term self-regulation, long-

term self-regulation with SPSS AMOS with Structural Equation Modeling. The estimation method uses maximum likelihood. The model is shown in Figure .1

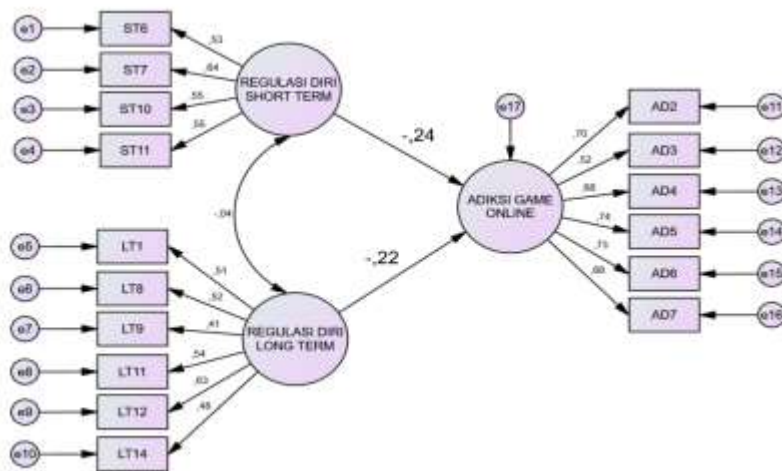


Figure 1. Model of the Relationship between Short Term Self-Regulation, Long Term Self-Regulation, and Online Game Addiction.

This model shows that short-term self-regulation and long-term self-regulation have an impact on online gambling addiction. The P-value of 0.000 shows that the variables used, short-term self-regulation and long-term regulation, have a significant effect (alpha =), namely 0.05. If the P-value is less than 0.05, the hypothesis is accepted.

Discussion

Based on the results of research on the youth esports community, it was found that there is a positive influence between self-regulation (short term) and online gambling addiction. This means that self-regulation (short term) with a significant value of 0.000 (Sig value <0.005) is one of the factors influencing teenagers with online gambling addiction. The short-term self-regulation of young people in the e-sports community was 53.2% in the moderate category. This shows that there is an impact between short-term regulation on online gambling addiction, as the significant value is 0.000, which means <0.05. Adolescents need a high level of self-regulation to avoid the occurrence of online gambling addiction, which is becoming more and more

complex due to the lack of self-control. Social Cognitive Theory (Bandura 1991 in Lee 2016), self-regulation is human behavior that is not only influenced by external variables but also self-regulation through the implementation of continuous self-influencing. There are three principles of the partial function of self-regulation, namely self-control, self-assessment, and self-reaction. To successfully implement self-regulation of online gambling addiction, one must observe behavior and gather information. Successful implementation of self-regulation in online gaming, users need to observe and collect information about performance behavior, evaluate it based on personal and social standards, exercise self-reactive influence on behavioral changes through incentives.

Bandura (1997) in Moilanen, 2007 suggests that regulation is an understanding of time, a key element of regulation in which adolescents can plan or prepare for an event in a short or long time. Barkley (1997) suggests that understanding time is a key element of self-regulation. Dias, Castillo, and Moilanen 2014 state that short-term self-regulation is the functioning of impulse control, attention, emotional control in a “momentary atmosphere” or regulation in a direct context or towards a direct goal. This proves that short-term self-regulation needs to be carried out to manage time and control behavior so that more optimal goals can be achieved.

Based on the performed analysis, it was found that there is an effect of long-term self-regulation on online gambling addiction in the youth esports community in Kupang city. This is proven from the results of the analysis in the form of a significance value of 0.000 (Sig value <0.005). The long-term self-regulation of young people is in the high category at 87.7%. This shows that when long-term self-regulation is high, the incidence of online gambling addiction in teenagers is minimized. Long-term self-regulation involves controlling the impulse or the direction of the effort over a longer period. This duration can last several weeks, months, or years. Long-term self-regulation can also involve extensive planning, such as planning to study at a university to achieve career goals. Long-term self-regulation

is more likely to involve impulse control that requires effort over a long period. This duration can last several weeks, months, even years (Moilanen, 2006).

Dias, Castillo, and Moilanen 2014 found that long-term self-regulation is a dimension of long-term self-regulation that assesses adolescents' efforts to control impulses, attention, and emotional relationships with longer-term goals.

Research shows that internet addiction has a positive correlation with self-regulation, namely that students with a tendency to internet addiction (internet addiction) spend more time in front of the internet so that learning time is reduced (Lee, Cho, Kim, & No, 2014). Someone who is addicted to online gaming will experience various symptoms such as salience (remembering to play online games all day), tolerance (spending more time playing online), mood change (playing online games to get problems to escape), relapse (the tendency to play online games again after not playing for a long time), withdrawal (feeling bad when you can't play online games), conflict (fighting with other people because of online Games being played excessively) and problems (ignoring other activities, causing problems). These seven criteria for online gambling addiction are measurements to determine whether an online gamer is addicted to an online game that has been determined by a gamer who meets four of the seven criteria, which is indicative of a gamer who is dependent on online gaming (Lemmens, 2009). Online gambling addiction negatively impacts or brings great loss to teenagers who experience it. According to Young (2006), people who play online games frequently become addicted or addicted. Dependent behavior that a person develops while engaging in a particular activity is known as addiction (Cardwell, 2003). Online gambling addiction is one of several aspects that feed into the psychosocial aspect associated with playing computer and video games (Lemmens, 2009). According to Marks (in Marks, Cavanagh & Gega, 2007), the type of behavioral addiction that has no effect on drugs or addictive substances is called media addiction. According to Weinsten (2010) in (Saputra, 2019), online gambling addiction is characterized by a person playing games excessively, which can harm players. The difficulty of focusing on education and work because they are constantly

thinking about the game, as well as the lack of responsibility for their education, leads many online gamers to choose not to go to school (skip) and work like homework to avoid (Effendi, 2017). It often happens that teenagers who are addicted to online games often have problems with their academics, so teenagers should have good self-regulation in learning so that they can outperform and manage their academics (Effendi, 2017). Teenagers who play online games more often tend to interact less with their peers, including the maturity of their identity, which can limit opportunities for adolescents to learn from their social environment and learn roles from their peers (Hurlock, 1994).

Early adolescence is the most vulnerable phase in its developmental phase, as early adolescence is a transition phase in which physical, psychological and social changes occur, making it possible to trigger a crisis phase characterized by a tendency towards deviant behavior (Ekowarni, 1993). Young people should be able to manage themselves and to manage their services and actions themselves.

Addiction to online gaming can be classified under the category of gaming disorder, a behavioral disorder that is contained in patterns of gaming (digital or video) and where individuals cannot control gaming (WHO, 2018). Game disorders can be said to mean that the person is socially and educationally disturbed in dealing with other people. People whose function is restricted for about 12 months (WHO, 2018). Therefore, it is important for individuals, especially adolescents, to understand and apply self-regulatory processes.

Bandura (2005) explains that self-regulation is the ability of humans to regulate themselves, to influence their behavior by regulating the environment, to provide cognitive support, and to draw consequences for their behavior. The most important factor that can help adolescents prevent bad influences or get adolescents out of a risky environment is cultivating self-regulation (Jessor and Jessor, in Moilanen, 2006). Research explains that regulation tends to focus on short-term conditions and cannot explain the long-term components of implementing regulation to shape individuals (Demetriou, in Moilanen, 2006). The ability to differentiate in the

short and long term is important as it will affect changes that occur in individuals, especially adolescents (Demetriou, in Moilanen, 2006).

Adolescents must prevent themselves from experiencing online gambling addiction, adolescents must have self-regulation, namely the ability to act flexibly, monitor, block, and/or use a strategy of behavior, attention, emotion, and cognition in response to internal stimuli adapt and the environment of the individual (Moilanen, 2006).

After further testing, it was found that long-term self-regulation influences online gambling addiction with a significant value of 0.000, where the value is <0.05 . Teens who have long-term self-regulation will be able to manage their time wisely or well when playing online games and not interfere with learning activities or other positive activities. Vohs and Baumeister (2011) (in Lee, Cheung, and Chan, 2016) found that people with high self-regulation can control thoughts, regulate emotions and inhibit impulses. Individuals who generally enjoy mental health, interpersonal relationships, and academic success (de Ridder et al. 2012; Tangney et al. 2004 in Lee, Cheung, and Chan 2016). This study also shows that the majority of teens in the esports community, or 72.20%, have no online gambling addiction. One of the factors causing this is that the teen has self-regulation in the high category. Teenagers have long-term self-regulation to control excessive behavior, or maybe teenagers have a perception of the dangers of online gambling addiction.

To prevent teenagers from experiencing online gambling addiction, teenagers must have the ability to regulate themselves when using online games. Soror et al (2015) (in Lee, Cheung, and Chan 2016) found that users with high self-regulation significantly reduced their use of online games and the associated negative consequences. In other words, users with high self-regulation are less likely to develop an online gambling addiction. Other factors that also influence the existence of online gambling addiction are social skills, socialization skills, belonging needs, and self-control, which were not examined in this study.

Conclusion

Based on the results of the research carried out, it can be concluded that there is a significant effect of self-regulation (short-term) on online gambling addiction among teenagers engaging in esports in the city of Kupang. There is a significant (long-term) effect of self-regulation on online gambling addiction among adolescents playing esports in the city of Kupang. Most of the teenagers (78.3%) joining the Kupang City esports community do not experience online gambling addiction.

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