The Effect of Online Game Addiction on Violent Behavior in High School Students

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Abstract: Addictive behavior online games the point where teenagers become dependent and lose control. Habits play game online in adolescents lead to changes in character such to become aggressive. Aggressive behavior not only in physical but also take of aggression anger and hostility can hurt people. This study to determine relationship between addictive behavior online games with aggressive behavior of High School students. Type research quantitative cross sectional approach. Population all students of class X-XI of SMAN at Tambun Utara. Sample using total sampling. Instrument used instrument by Chen and Chang (2008) for level online game addiction and the Buss-Perry Aggression Questionnaire Scale (BPAQ) for level aggressive behavior. Analysis data used descriptive statistical and chi-square. The results, it is known characteristics respondents are dominated by boy (63.1%) coming from class XI (64.1%) and 17 years old (47.6%), the type of online game most often played is Mobile Legend (62.1%) with playing duration for 3 hours (62.1%), high online game addiction (52.4%), and high aggressive behavior (57.3%). And results chi square test obtained that p-value of $p= 0.001$ with $= 0.05$ (p-value $<\alpha$), can be concluded that there is a significant relationship between game addiction and aggressive behavior in students.

Keywords: Teenagers; addictive behavior game online; aggressive behavior.

INTRODUCTION

Technological advances are currently developing very rapidly, creating an increase in human creativity in utilizing and developing existing information technology. At first technology only served to facilitate communication, but now technology can develop aspects of entertainment such as game media, which is a media game with the help of electronic and visual media. Online games are played via an internet network that can be accessed on gadgets, computers, laptops and others (Gusdiansyah and Ananda, 2022).

Based on statistical data, in 2020 in Indonesia there are 50.8 million Dahwilani online game users (2020). Meanwhile, the number of online game users reached 60.5% of the total number of internet users (kumparan.com, 2021). The highest access to online games occurs in adolescents, with a percentage of 64.45% of male youth and 47.85% of female adolescents aged 12-22 years (Lestari, 2019). Bekasi is one of the cities in West Java with a fairly large population using online games, namely 66.4%. So that the city ranks 16th out of 44 big cities in Indonesia. (Kuncorojati, 2020).

Online games are basically seductive because they have elements of happiness and fun as well as having high appeal and excitement. so that anyone who plays it can lead to addictive behavior. Online game addiction is when someone plays online games excessively to the point of becoming addicted and even losing control to limit their use (Oktalia, 2019).

Young (2009, in Kartini, 2016) said that someone who is addicted to online games will feel anxious and bored when they cannot play online games. These conditions have an impact on daily life such as neglecting school affairs, work, association, personal hygiene and health. Online game addiction will bring up a very strong desire in a person to continue playing games so that it interferes with his daily activities (Seok and DaCosta, 2014).

Adolescence is a transitional phase from childhood to adulthood. In this phase, adolescents do not get the status of children or adults. In this phase adolescents will experience several cognitive, biological and social emotional changes Santrock (2003, in Hasmarlin, 2019). At this time there was a change in the social-emotional aspect, where

adolescents found it difficult to control their emotions. This is in accordance with Ber's statement (2012) that during the adolescent phase there are many complex conflicts so that the adolescent phase is known as the storm and stress phase. This period is a difficult time for teenagers, especially for families. If teenagers cannot control themselves, they will be very easily influenced by positive or negative behavior. One of the negative impacts is that they are easily influenced by excessive online game play and can cause addiction (Persada, Hafina and Nurhudaya, 2017).

Negative impacts due to online game addiction were reported in 2020 where there were teenagers who were rushed to rehabilitation centers because they did not want to be separated from their gadgets to play online games and even committed violence against their parents when their gadgets had no quota or the gadget's battery was weak (Surjaya, 2021)

Aggressive behavior especially shown by teenagers who are addicted to online games is not only in the form of physical actions but can also be in the form of verbal which can harm and hurt other people (Febrina, 2014). In games, teenagers don't only play but also bring the stimulus displayed in the game (Lestari, 2019).

From time to time there has been an increase in cases of violence perpetrated by teenagers who are addicted to online games. The Child Protection Commission in the Bekasi area emphasized that there was a shift in acts of violence committed by adolescents from those in the form of sexual violence to physical violence. This was triggered by the current trend of teenagers playing online games. Because in online games there is an element of violence that will trigger the desire to practice it so that brawl behavior occurs between students (Yusnilaningsih, 2019).

The behavior displayed by teenagers who are addicted to online games can result in the loss of the nation's next generation. Special attention is needed to suppress incidents of this violence, because adolescents have an identity as the founders of the nation, where the size of a nation depends on the amount of development carried out by youth as a form of their love for their nation and country (Malik, 2020).

Based on the description of the phenomenon above, it is necessary to have special treatment for adolescents who experience this problem, including counseling at school. This phenomenon does not only occur in the Bekasi Regency area, but also in other areas. Therefore, the writer is interested in u to conduct research on the Relationship between Online Game Addictive Behavior and Aggressive Behavior in Students of SMA Negeri 2 Tambun Utara.

RESEARCH METHODS

This type of research is quantitative with a cross sectional approach. The population of this study were all students of class X-XI at SMAN Tambun Utara, totaling 560 students. Sampling was carried out using a non-probability sampling technique with the type of total sampling. The number of research samples totaled 108 which were complete and in accordance with the inclusion criteria according to the inclusion criteria, so the sample was taken with a total sample of 103 respondents.

Variables The variables of this study consist of independent variables (online game addiction) and dependent variables (aggressive behavior). When the research was conducted in May 2022 at SMA Negeri 2 Tambun Utara with the help of a teacher. The data collection technique was carried out by distributing questionnaires online with the Google Form link. The measurement tools used are Chen and Chang's (2008) instruments for online game addiction levels and the Buss-Perry Aggression Questionnaire Scale (BPAQ) for aggressive behavior levels.

Both instruments were tested for validity and reliability on 35 students. The normality test used the one-sample Kolmogorov-Smirnov test statistical technique. The value of r count is 0.405-0.809. So it can be concluded that all questions in this questionnaire are declared valid. For the reliability test, the value of r is 0.403-0.718. So it can be concluded that all questions in this questionnaire are declared valid. Data analysis using chi square

This research complied with health ethics and was approved by the research ethics committee of the PoltekkesKemenkes Jakarta III with No.LB.02.02/KEPK/015/2022.

RESULTS AND DISCUSSION

Table 1. Frequency distribution of respondent characteristics (n=103)

No	Characteristic	Catagory	Frequency	Percent
1	Sex	Male	65	63.1
		female	38	36.9
2	Class	X	37	35.9
		XI	66	64.1
3	Age	15	16	15.5
		16	38	36.9
		17	49	47.6
4	Game Catagory	Mobile Legend	64	62.1
		PUBG	11	10.7
		Free Fire	7	6.8
		Lainnya	21	20.4
5	Game Play Durition	Short playing	64	62.7
		Long playing	38	37.9
6	Addiction Level	Low	49	47.6
		Hight	54	52.4
7	Aggretion Level	Low	44	42.7
		Hight	59	57.3

Based on table 1.

Most of the respondents (63.1%) who experienced online game addiction were male. This is because men play more online games than women. The results of this study are in accordance with the research of Oktavian, Nurhidayat and Nasriati, (2018) which states that the majority of online game players are male. Because men have different brains than women. Men's brains are more active when playing online games than women's. So that men spend more time playing online games. It can be concluded that male respondents spend more time playing online games than women.

The majority of respondents came from class XI as much as 64.1%. This finding is in line with research at SMA Muhammadiyah 1 Yogyakarta by Latifah et al (2022) where the majority of respondents who play online games are among class XI students (51.9%).

This study also concluded that the majority of respondents were adolescents aged 17 years (47.6%). This result is in line with Teofanda's research (2020) which shows that the most age of respondents who play games is in the age range of 17-20 years as many as 134 (66.7%).

Adolescence is a period of transition from children to adulthood (Santrock, 2007). Rice (in Agustriyana&Suwanto, 2017) during this period adolescents have relatively erratic moods and tend not to be able to manage problems that occur properly (storm and stress periods). This of course will lead to stress in adolescents.

The burden of school assignments can cause stress in adolescents starting from the time of collecting assignments, homework that is still being given and also school exams (Priskila and Savira, 2019). One way to reduce stress levels in adolescents is to play online games.

Erik Erikson's developmental theory of identity vs role confusion states that adolescents have the most important developmental task, namely the formation of self-identity. In this phase, adolescents learn the values of life from what they see in their surroundings. For teenagers, playing online games is the meaning of true identity. The existence of a teenager will be seen if they play online games (Malik, 2020). Apart from that, with online games, teenagers can forget about the problems they face for a moment (Persada, Hafina and Nurhudaya, 2017).

In this study, it was found that the type of online game that was often played by respondents was Mobile Legend (62.1%). In accordance with the results of research by Pratiwi et al (2018), it was found that the majority of students like to play the Mobile Legend game (53.85%).

Based on the statement of Wibisono &Naryoso (2019) Mobile Legend is a MOBA (Multiplayer Online Battle Arena) type of game where playing this game prioritizes the strategy of each player. Apart from that, in Mobile Legend players can interact with other players. This can be used to train cooperation between players and make new friends because this game requires a team.

The majority of the time spent by respondents playing online games is 3 hours each day (62.1%). This is directly proportional to Ramadhani's research (2019) which states that the majority of the time respondents spend playing online games in a week is 21-30 hours (28%). Oktavian, Nurhidayat and Nasriati (2018) said that currently games are made easy to access and are designed to be more challenging in order to increase the interest of the players. Not only that, the content that is displayed is also designed to stimulate adrenaline so that it attracts the attractiveness of the players and creates a desire to complete challenges so that time is lost.

The level of online game addiction of respondents is in the high category (52.4%). These results are consistent with research by Apriani et al (2020) where adolescents experience addictions to online games are in the high category (41.8%). Online game addiction is an addiction to the use of internet technology, especially online games or known as Computer Game Addiction (Kurniawan, 2019).

Someone is said to be addicted to online games when they spend ≥ 2 hours per day accessing online games (Gusdiansyah and Ananda, 2022). From the results of filling out the questionnaire which consisted of 5 aspects, the most dominant aspect was filled in by respondents, namely the aspect of tolerance such as spending most of the time playing online games, forgetting the time when playing online games.

This is in accordance with the results of research by AmelliaHardanti, Nurhidayah and YuyunRahayu (2013) that many online game players cannot stop playing games. This is because players will lose motivation to do something when not playing online games.
This phase will also cause unpleasant feelings in a player. This is the phase that causes online game players to increase their playing time. This is the phase that causes online game players to increase their playing duration.

Too much playing time makes teenagers unproductive in carrying out their daily activities. Teenagers become lazy to do other activities and are only fixated on online games. This is in line with the theory presented by King, D. L., &Delfabbro (2018) that spending excessive time playing online games can disrupt daily life. This distraction shifts the adolescent's priorities to generate high levels of interest and motivation for the positive.

The level of aggressive behavior of respondents is in the high category (57.3%). In accordance with the research of Hidayat, Yusri and Ilyas (2013) which states that there is physical aggressive behavior (35.32%), verbal aggressive behavior is present (41.30%) and aggressive behavior in the form of damaging and destroying property is present (30.42%).

Aggressive behavior can be interpreted as an outburst of emotion shown by someone when they cannot fulfill their desires in the form of verbal, physical, anger and hostility. Febrina (2014) says that aggressive behavior is verbal or physical behavior that can harm or hurt other people. Verbal aggression is a form of violence that aims to annoy, hurt, threaten, and show rejection of someone verbally (Saputra, Hanifah and Widagdo, 2017). Based on the research of Isnaini et al (2021) verbal aggressiveness can be caused by the high intensity of playing online games, because being constantly in the game encounters many obstacles to achieving victory. Not infrequently many players experience defeat first to achieve victory, this is what creates resentment in teenagers so that aggressive behavior is formed such as speaking harshly, swearing and threatening.

In line with the Social Learning Theory in Oktalia's research (2019), the occurrence of aggressive behavior in a person is due to the process of imitating what is seen. Teenagers carry out aggressive behavior when they observe models who behave aggressively. It can be concluded that aggressive behavior can be influenced by something they see, especially what they see in online games.

Table 2. The Relationship Between The Characteristics of Respondents With Aggressive Behavior

No	Characteristic	Agresif Behavior				P
		Low		Hight		
		Freq	Percen	Freq	Percen	
1	Sex					
	Male	30	46.2	35	53.8	p=. 0.357 OR 1.469
	Female	14	36.8	24	63.8	
2	Class					
	X	22	59.5	15	40.5	p= 0.010 OR 2.933
	XI	22	50	44	66.7	
3	Age					
	15	8	50	8	50	
	16	19	50	9	50	p=0.292
	17	17	34.7	13	65.3	
4	Game Catagory					
	Mobile Legend	25	39.1	39	60.9	
	PUBG	4	36.4	7	63.6	p= 0.509
	Free Fire	3	42.9	4	57.1	
	Lainnya	12	42.7	9	57.3	
5	Game Play Duration					
	Short Playing	33	51.6	31	48.4	p=0.049
	Long Playing	11	50.3	28	47.7	
6	Adiction Level					
	Low	19	59.2	20	40.8	p=0,001 OR 3.770
	Hight	15	27.8	39	72.2	

A. Gender relationship to aggressive behaviour

Based on table 2. it was found that there were 35 (53.8%) male respondents who had high aggressive behavior and obtained p = 0.357 with α = 0.05 (p-value > α), and OR = 1.469. It can be concluded that there is no significant relationship between gender and aggressive behavior in students, and male respondents have a 1.4 times higher chance of behaving aggressively than women. These results are in accordance with research by Lestari (2019) which states that teenage boys have a higher level of aggressiveness than girls.

Adolescent boys tend to show aggressive behavior more quickly and express physical aggression. This behavior is much influenced by their daily environment, such as home, school and peers. Teenage boys basically want to show their masculinity. It can be seen that many young boys fight with physical strength.

Based on the findings of Saputra, Hanifah and Widagdo (2017) there is no significant difference between male and female adolescents who behave aggressively at SMK Muhammadiyah Yogyakarta. This shows that the aggressive behavior shown by men and women tends to be the same, it's just that the forms of aggression shown are different. Boys are more aggressive in verbal and physical forms, while girls are aggressive in the form of hatred and anger.

B. Class relations to aggressive behavior

Based on table 2. it was found that 44 (53.8%) class XI respondents had high aggressive behavior and obtained p = 0.010 with α = 0.05 (p-value < α), and OR = 2.933. It can be concluded that there is a significant relationship between classes on aggressive behavior in students, and class XI respondents have a 2.9 times higher chance of behaving aggressively than class X respondents. Based on research by Lisnadiyanti&Bagus (2019) it is known that the majority at the age of 16-17 years are more vulnerable engage in aggressive behavior, especially with students who are under their age.

According to the researcher's point of view, this happens because students in class XI have high egocentricity where they are in the phase of wanting to be the center of attention and wanting to show their abilities in front of many people. With this characteristic, class XI students usually show that they are better and more powerful than their other friends, when there is one person who has more abilities, jealousy and dislike will arise. Aggressive behavior displayed can be in the form of aggressive verbal, physical, anger and hostility as a form of embodiment of envy, revenge, seeking popularity and showing power.

C. The relationship between age and aggressive behavior

Based on table 2. it was found that 17-year-old respondents had high aggressive behavior, there were 32 (65.3%), obtained p = 0.292 with α = 0.05 (p-value > α). It can be concluded that there is no significant relationship between age and aggressive behavior in students. In line with Fatmawati's research (2017) aggressive behavior that occurs among children and adolescents from year to year continues to increase both in the number and variety of forms of aggressive behavior shown.

Erik Erikson said that the psychosocial development of adolescents tends to have problems with emotions, feelings, and attitudes, adolescents are easily angry, offended, and have difficulty controlling themselves. This happens because teenagers are in the identity crisis stage. The identity crisis they are experiencing makes them want to explore a lot and get new experiences that can affect the temperament of teenagers, it is not uncommon for teenagers to experience emotional upheaval.

Environmental factors where they live, school, and peers certainly influence the behavior of adolescents in everyday life. Basically, adolescence is the age that is most at risk for aggressive behavior due to factors of parenting, parental temperament, and social status.

D. The relationship between online game types and aggressive behavior

Based on table 2. it was found that 39 (60.9%) respondents playing the Mobile Legend game had high aggressive behavior, obtained p = 0.509 with α = 0.05 (p-value > α). It can be concluded that there is no significant relationship between the type of game and aggressive behavior in students.

Based on the research by WaritsMarinsa Putri, Hamiyati and Doriza (2020) said that based on the results of interviews, it was found that three informants said that the online game Mobile Legend has a gameplay that is easy to play so that players are easy to understand and master the game strategy and easy to win.

This is in accordance with Kevino's statement (2018) where one of the characteristics of the MOBA (Multiplayer Online Battle Arena) genre game has a simple game concept so it is easy to understand.

As well as being easy to play, this game also features warfare and combat with the aim of taking down your opponent. This makes the game even more exciting so it will be difficult for players to stop. The elements of violence displayed in this game will trigger aggressive behavior, because the brain will stimulate elements of violence that are often seen. This is in direct comparison with the research of Wibisono &Naryoso (2019) which states that verbal aggressive behavior in adolescents occurs because there is a stimulus to engage in verbal aggression in the Mobile Legend game.

It can be concluded that this type of Mobile Legend game is popular with respondents because it has an easy-to-understand gameplay and features elements of violence that make the game more exciting.

E. The relationship between the duration of playing online games and aggressive behavior

Based on table 2. it was found that respondents spending 3 hours playing online games had high aggressive behavior, there were 31 (48.4%), obtained p = 0.049 with α = 0.05 (p-value < α). It can be concluded that there is a significant relationship between the duration of playing games on aggressive behavior in students.

According to the researcher's assumption, the more time spent playing online games with violent elements, the higher the aggressive behavior will emerge. This happens because of the curiosity that arises in a teenager because

he wants to win the game. This is in line with the research of Khaerullah, Widianti and Sumarni (2020) which states that the addictive category of playing online games with duration of 2-10 hours/week is known that when students lose playing games they feel curious and play games continuously until they win even when students spend 9-12 hours per day. When they lose a game, they express their emotions by getting angry, saying rudely and even slamming and hitting gadgets.

Thus it can be concluded that when playing games with high intensity, the higher the tendency to have aggressive behavior and vice versa.

F. The relationship between online game addiction and aggressive behavior

Based on table 2. it was found that respondents with a high aggressive level had a high duration of playing games, there were 39 (72.2%), obtained p-value = 0.01 with α = 0.05 (p-value <α) and OR = 3.770. It can be concluded that there is a significant relationship between online game addiction and aggressive behavior in students and respondents with high addiction have a 3.7 times chance of aggressive behavior compared to respondents with low addiction.

The results of this study are in accordance with Oktalia's research (2019) which showed that respondents who experienced high online game addiction tended to have high aggressive behavior, namely (80.6%), compared to respondents who were addicted to moderate online games, had low aggressive behavior, namely (46.6%), and respondents those who experience mild online game addiction have low aggressive behavior (57.4%). Statistical test results using the chi square test obtained a p-value of 0.000 <α (0.05). This shows that there is a significant relationship between online game addiction and aggressive behavior in students.

In Satria's research, Nurdin and Bachtiar (2015) said that someone who behaves aggressively will imitate what is shown by the game on the gadget screen even though it is done in a very short time (not addicted). This is in accordance with Social Learning Theory where the learning process occurs to someone who plays violent games.

In addition to online game addiction, aggressive behavior can also be influenced by other factors, namely parenting and peer factors.

Based on Einstein &Indrawati's research (2016) it was found that students who have high aggressive behavior are caused by the behavior of parents who are strict and very strict in making rules for their children so that they do not feel free and pressured to comply with the rules made by their parents. This feeling of compulsion that arises can cause emotional outbursts in the form of resistance to parents. This strict parental upbringing can occur in a learning process in which children follow the attitude of their parents.

It can be concluded that when parents have harsh treatment of children, children will also carry the behavior shown by their parents.

CONCLUSION

Based on the results of research data analysis on the relationship between online game addiction and aggressive behavior in SMA Negeri 2 Tambun Utara students, it can be concluded that the majority of respondents were male (63.1%) coming from class XI (64.1%) and dominated by the 17 year old category (47.6%) with the type of game that is often played, namely Mobile Legend (62.1%) with a duration of 3 hours (62.1%). And most of the Tambun Utara 2 Public High School students have a high online game addiction (52.4%) and high aggressive behavior (57.3%). The chi-square test obtained p-value = 0.01 with α = 0.05 (p-value <α) and OR = 3.770. So it can be concluded that there is a significant relationship between online game addiction and aggressive behavior in students and respondents with high addiction have a 3.7 times chance of aggressive behavior compared to respondents with low addiction. This happens because teenagers will imitate what is shown by the game on the gadget screen even though it is done in a very short time (not addicted). This is in accordance with the Social Learning Theory which states that the learning process occurs to someone who plays games with elements of violence.

BIBLIOGRAFI

1. Agustriyana, N. A. dan Suwanto, I. (2017) 'Fully Human Being Pada Remaja Sebagai', *JBKI (jurnal bimbingan konseling indonesia)*, 2(1), pp. 9–11.

2. Amellia Hardanti, H., Nurhidayah, I. dan Yuyun Rahayu, S. (2013) 'Faktor-faktor yang Melatarbelakangi Perilaku Adiksi Bermain Game Onlinepada Anak Usia Sekolah', *Jurnal Keperawatan Padjadjaran*, v1(n3), pp. 166–175. doi: 10.24198/jkp.v1n3.5.

3. Apriani, R. *et al.* (2020) 'Social Intelligence, Love, Self-Regulation Pada Remaja yang Adiksi Game Online Jenis Agresif dan Non-Agresif', *Ilmu Pendidikan: Jurnal Kajian Teori dan Praktik Kependidikan*, 5, p. 2.

4. Ber, L. E. (2012) 'Development through the Lifespan: Dari Prenatal Sampai Remaja (Transisi Menjelang Dewasa).'

5. Dahwilani, D. (2020) *Survei: 16,5 Persen Masyarakat Habiskan Waktu Main Game Online selama Pandemi Covid-19*, *inews.id*. Available at: https://www.inews.id/techno/internet/survei-165-persen-masyarakat-habiskan-waktu-main-game-online-selama-pandemi-covid-19.

6. Einstein, G. dan Indrawati, E. S. (2016) 'Pendidikan Orang Tua Dan Aspek-aspek Kepribadian Pada Prilaku Disruptif Anak', *Empaty*, 5(3), pp. 491–502. Available at: https://media.neliti.com/media/publications/69811-ID-none.pdf.

7. Fatmawati (2017) 'Hubungan Permainan Video Games (Playstation) dengan Perilaku Agresif Anak dan Remaja di Area Terminal Kabupaten Bulukumba', *Journal Of Islamic Nursing*, 2(2), pp. 20–29.

8. Febrina, C. La (2014) 'Pengaruh Intensitas Bermain Game on-Line Terhadap Agresivitas Siswa', *JIV-Jurnal Ilmiah Visi*, 9(1), pp. 28–35. doi: 10.21009/jiv.0901.4.

9. Gusdiansyah, E. dan Ananda, Y. (2022) 'Teknik Hipnoterapi dalam Mengurangi Kecanduan Game Online Pada Remaja Hypnotherapy Techniques in Reducing Online Game Addiction in Teenagers', 6(1), pp. 43–47.

10. Hasmarlin, H. (2019) 'Self-Compassion dan Regulasi Emosi pada Remaja Self-Compassion and Emotion Regulation In Adolescence', 1(2021), pp. 148–156. Available at: http://dx.doi.org/10.24014/jp.v14i2.7740.

11. Isnaini, I. *et al.* (2021) 'Intensitas Bermain Game Online Berhubungan dengan Perilaku Agresif Verbal Remaja', *Jurnal Keperawatan Jiwa (JKJ): Persatuan Perawat Nasional Indonesia*, 9(1), pp. 235–242.

12. Kartini, H. (2016) 'Hubungan antara konformitas teman sebaya dan intensitas bermain game online dengan intensi berperilaku agresif pada siswa', *Psikoborneo*, 4(4), pp. 482–489.

13. Kevino, S. (2018) *Apa Itu MOBA?* Available at: https://esportsnesia.com/penting/apa-itu-moba/.

14. Khaerullah, U., Widianti, E. dan Sumarni, N. (2020) 'Tingkat Agresivitas Mahasiswa Universitas Padjadjaran Kampus Garut Yang Mengalami Kecanduan Game Online', *Itnow*, 50(4), pp. 8–10. Available at: http://ejurnal.ars.ac.id/index.php/keperawatan/article/view/167.

15. King, D. L., & Delfabbro, P. H. (2018) *Internet gaming disorder: Theory, assess- ment, treatment and prevention.* Edited by Academic Press. New York: Elsevier Inc. Available at: https://books.google.co.id/books?hl=id&lr=&id=1KNPDwAAQBAJ&oi=fnd&pg=PP1&dq=King,+D.+L.,+%26+Delfabbro,+P.+H.+(2018).++Internet+gaming+disorder:+Theory,+assess-+ment,+treatment+and+prevention.&ots=WsZQYwFeKs&sig=DLgZCKrF1D9vcekAvdCYclIqzxE&redir_esc=y#v=o.

16. kumparan.com (2021) 'Pemain Mobile Game di Indonesia Capai 60,5% dari Pengguna Mobile Internet', *kumparan.com*, 3 September. Available at: https://kumparan.com/beritaanaksurabaya/pemain-mobile-game-di-indonesia-capai-60-5-dari-pengguna-mobile-internet-1wSTNZVFelo/1.

17. Kuncorojati, C. (2020) *3 Kota Besar Indonesia Ini Punya Pengalaman Main Game Mobile Terbaik*, *medcom.id*. Available at: https://www.medcom.id/teknologi/news-teknologi/0KvXjv9b-3-kota-besar-indonesia-ini-punya-pengalaman-main-game-mobile-terbaik.

18. Kurniawan, E. (2019) 'PENGARUH ADIKSI BERMAIN GAME ONLINE TERHADAP PELAKSANAAN IBADAH SHOLAT SISWA SEKOLAH MENENGAH ATAS NEGERI 1 SIAK KECAMATAN SIAK KABUPATEN SIAK', *UNIVERSITAS ISLAM NEGERI SULTAN SYARIF KASIM RIAU PEKANBARU*, pp. 1–19.

19. Latifah, L. *et al.* (2022) 'Perbedaan Skor Risiko Kecanduan Video Game Berdasarkan Strategi Koping pada Remaja SMA Differences in The Risk of Video Games Addiction Score Based on Coping Strategies in High School Teenagers PENDAHULUAN Gadget dan internet merupakan fasilitas yang memb', 6(1), pp. 19–30. doi: 10.22146/jkkk.67059.

20. Lestari, A. M. (2019) 'HUBUNGAN KECANDUAN GAME ONLINE DENGAN PERILAKU AGRESIF PADA REMAJA', *Journal Psikologi*, 9(1), pp. 12–16.

21. Lisnadiyanti, L. dan Bagus, T. (2019) 'Hubungan Antara Pola Asuh Keluarga Dan Pengaruh Peer Group Terhadap Potensi Perilaku Kekerasan Fisik (Bullying Fisik) Pada Anak Remaja Putra Di Sma 22 Jakarta', *The Shine Cahaya Dunia Ners*, 4(1). doi: 10.35720/tscners.v4i1.138.

22. Malik, R. et al (2020) 'ALIENASI REMAJA DARI LINGKUNGAN SOSIAL (TELAAH KRITIS PADA GENERASI MUDA PECINTA GAME ONLINE)', *Jurnal Kajian Sosiologi*, 9(2), pp. 46–58.

23. Oktalia, P. (2019) 'HUBUNGAN KECANDUAN GAME ONLINE DENGAN PERILAKU AGRESIF SISWA DI SMP NEGERI 4 UNGARAN', *Skripsi*.

24. Oktavian, N., Nurhidayat, S. dan Nasriati, R. (2018) 'PENGARUH DURASI BERMAIN TERHADAP ADIKSI GAME ONLINE PADA REMAJA Di Warung Internet XGC Kecamatan Dolopo Kabupaten Madiun', *Health Sciences Journal*, 2(2), p. 72. doi: 10.24269/hsj.v2i2.160.

25. Persada, G. A., Hafina, A. dan Nurhudaya, N. (2017) 'Program Konseling Restrukturisasi Kognitif Untuk Mereduksi Kecenderungan Adiksi Game Online Pada Remaja', *Indonesian Journal of Educational Counseling*, 1(1), pp. 79–92. doi: 10.30653/001.201711.7.

26. Pratiwi, R. R., Yakub, E. dan Umari, T. (2018) 'Siswa yang Kecanduan GAme Online dan Perilaku Agresif di SMP Negeri 14 Pekanbaru', *Jurnal Online Mahasiswa FKIP*, 5(1), pp. 1–14.

27. Priskila, V. dan Savira, S. I. (2019) 'Hubungan antara self regulated learning dengan stres akademik pada siswa kelas XI SMA negeri X Tulungagung dengan sistem full day school', *Jurnal Penelitian Psikologi*, 6(3), pp. 1–7. Available at: https://jurnalmahasiswa.unesa.ac.id/index.php/character/article/view/29131.

28. Ramadhani, A. (2019) 'Hubungan Motif Bermain Game Online dengan Perilaku Agresivitas Remaja Awal (Studi Kasus di Warnet Zerowings, Kandela dan Mutant di Samarinda)', *eJounal Ilmu Komunikasi*, 1(1), pp. 136–158.

29. Santrock (2007) *Psikologi Pendidikan edisi kedua*. 2nd edn. Jakarta: Kencana. Available at: https://difarepositories.uin-suka.ac.id/35/.

30. Saputra, W. N. E., Hanifah, N. dan Widagdo, D. N. (2017) 'Perbedaan Tingkat Perilaku Agresi Berdasarkan Jenis Kelamin pada Siswa Sekolah Menengah Kejuruan Kota Yogyakarta', *Jurnal Kajian Bimbingan dan Konseling*, 2(4), pp. 142–147. doi: 10.17977/um001v2i42017p142.

31. Satria, R. A., Nurdin, A. E. dan Bachtiar, H. (2015) 'Hubungan Kecanduan Bermain Video Games Kekerasan dengan Perilaku Agresif pada Murid Laki-laki Kelas IV dan V di SD Negeri 02 Cupak Tangah Pauh Kota Padang', *Jurnal Kesehatan Andalas*, 4(1), pp. 238–242. doi: 10.25077/jka.v4i1.228.

32. Seok, S. dan DaCosta, B. (2014) 'An Investigation into the Questionable Practice of Using Excessive Massively Multiplayer Online Game Play as a Marker of Pathological Video Game Dependence among Adolescent and Young Adult Male Players', *Psychology*, 05(04), pp. 289–299. doi: 10.4236/psych.2014.54039.

33. Surjaya, A. (2021) '2 Remaja Bekasi Gangguan Jiwa Akibat Kecanduan Bermain Game di Ponsel', *sindonews.com*. Available at: https://megapolitan.okezone.com/read/2021/03/18/338/2379910/kecanduan-game-online-2-pelajar-smp-di-bekasi-dirawat-di-panti-rehabilitasi#amp_tf=Dari %251%24s&aoh=16559477732196&csi=1&referrer=https%3A%2F%2Fwww.google.com.

34. Teofanda, R. (2020) 'Intensitas Bermain Game Online Mobile Playeruknown's Battleground (PUBG) Dengan Kencenderungan Agresivitas Pada Dewasa Awal', *Cognicia*, 8(1), pp. 118–130. Available at: http://ejournal.umm.ac.id/index.php/cognicia/article/view/11749.

35. Warits Marinsa Putri, N., Hamiyati dan Doriza, S. (2020) 'Dampak game online : Studi fenomena perilaku trash-talk pada remaja', *Jurnal Psikologi Malahayati*, 2(2), pp. 72–85.

36. Wibisono, A. dan Naryoso, A. (2019) 'Hubungan Antara Intensitas Bermain Game Mobile Legend Dan Pengawasan Orang Tua Dengan Perilaku Agresif Verbal Pada Anak Remaja', *Interaksi Online*, 7(3), pp. 179–187. Available at: https://ejournal3.undip.ac.id/index.php/interaksi-online/article/view/24140.

37. Yusnilaningsih, R. (2019) 'No Title', *PikiranRakyat.com*, 8 April. Available at: https://www.pikiran-rakyat.com/jawa-barat/pr-01309812/online-game-picu-kasus-kekerasan-anak-di-bekasi.