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# The Relationship Between Parenting and Video Games of Addiction Trends During COVID-19 Pandemic in Adolescents at Muhammadiyah 1 Senior High School Yogyakarta

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# ARTICLE INFO

### ABSTRACT

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### Keywords

Video game addiction COVID-19 Pandemic Parenting style High school teens The COVID-19 pandemic has had an impact on school closures and social distancing. Teenagers spend time playing video games to overcome boredom, as a result, teenagers are increasingly attached to video games so they are at risk of experiencing addiction that has a negative impact on behavior and social. Parenting patterns determine and prevent the risk of video game addiction in adolescents. The three types of parenting are authoritarian, democratic, and permissive. Choosing the wrong parenting style can increase the risk of video game addiction in adolescents. This research is a non-experimental, descriptive-analytic with a crosssectional approach. The research subjects were students of firstgrade SMA Muhammadiyah 1 Yogyakarta. GAS was an instrument to measure game addiction. PAQ was an instrument to measure parenting style. Total of the research subjects 168, 7 subjects were excluded, and 161 subjects were obtained who play video games with authoritarian parenting 21 (13.0%), permissive 14 (8.7%), and democratic 126 (78.3%). There is a significant relationship between parenting styles and tendencies toward video game addiction (x2=13.17, p=0.001, C=0.275). Type of parenting authoritarian, permissive, and gender has a significant effect on the tendency of video game addiction, with (OR=6.05 for authoritarian, OR=6.3 for permissive, and OR=5.3 for gender). There is a significant relationship between parenting style and the tendency of video game addiction in adolescents at SMA Muhammadiyah 1 Yogyakarta. Authoritarian and permissive, as well as gender are the most influential factors in the behavior of video game addiction tendencies in teenagers at SMA Muhammadiyah 1 Yogyakarta.

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### INTRODUCTION

Technological sophistication is one of the main factors in the development of online games in this era of globalization. During the COVID-19 pandemic, technology emerged as a 'savior' as it helps each individual to stay connected with those around him. Social distancing, quarantines, school closures, and home isolation are increasing concerns about problematic internet use and technology addiction among children and young people. The paradigm shift in online learning and classrooms has created a dilemma among parents and children in limiting screen time or going with the flow<sup>16</sup>.

Children and teens are spending more time playing online games than school or studying during the pandemic. Although video games are being promoted as a way to address social distancing measures from the COVID-19 pandemic, restrictions on use should also be emphasized<sup>1</sup>. Teenagers who play video games excessively can experience several mental health problems such as lack of sleep, decreased appetite, irritability, mood swings, anger, and frequent emotional outbursts.

Adolescents are more likely to engage in pathological play than people in other age groups<sup>2</sup>. Social distancing and changes in daily routines due to the COVID-19 pandemic have intensified gaming behavior among teenagers. This behavior increases the risk of gaming disorder which is associated with poor academic performance, loneliness, and a number of health and mental problems<sup>3,4</sup>. Adolescents have a greater risk of experiencing game addiction than adults<sup>5</sup>. Teenagers are considered to be more often and more prone to online game addiction than adults, because adolescence is a period of instability, and tends to be more prone to trying new things<sup>6</sup>.

Adolescents with game addiction will experience several symptoms such as salience (thinking about playing video games all day), tolerance (increasing time playing video games), mood modification (playing online games to escape from problems), and relapse (tending to play games). returning online after a long period of not playing), withdrawl (feeling bad if you don't play online games), conflict (fighting with other people because playing online games excessively), and problems (ignoring other activities causing problems).

During the period of adolescent development, the family plays an important role in providing supervision and management of adolescent free time. According to Smart (2010) there are several factors that cause a person to be addicted to playing video games, namely lack of attention from those closest to them, depression, lack of supervision, lack of activity, environment, and parenting<sup>7</sup>. Parenting is one of the factors that exist in childhood and adolescence that can determine future behavior. Parenting includes three types, namely authoritarian, democratic, and permissive, each parenting pattern has its own characteristics and gives different effects on adolescent behavior<sup>8</sup>. Teenagers who are in a less warm and less supportive family environment

will be motivated to look for other alternatives, especially during the current pandemic, namely playing video games.

Research in Manado showed that 31 teenagers experienced addiction to online games from democratic parenting<sup>18</sup>. So, it can be concluded that democratic parenting can also cause online game addiction in children because children can do unexpected things if they are not balanced with parental control. Authoritarian parenting is associated with a low level of addiction to online games<sup>9</sup>, because authoritarian parenting is parents who educate their children with a strict and rigid attitude in applying the rules, and will force children to always obey the rules that have been made<sup>10</sup>. Moazedian (2014) shows a high category of internet use addiction in authoritarian parenting<sup>10</sup>, because parents who have authoritarian parenting tend to have many emotional, moral, medical and social problems in children<sup>12</sup>. Kusumawati (2017) shows the results that the level of addiction to online games with permissive parenting is in a high category compared to other parenting patterns because permissive parenting is not controlling or supervising the behavior of their children<sup>13,14</sup>.

Yogyakarta is ranked second after Jakarta, Bogor, Tangerang, Bekasi (Jabotabek) in the development of the game industry in Indonesia<sup>20</sup>. This increases the opportunity and ease of using video games in the city of Yogyakarta compared to other areas. Based on interviewing the school counselors, information was obtained that SMA Muhammadiyah 1 Yogyakarta, which is located in urban areas and applies technological development, reports aggressive behavior problems in its students so that it has an impact on the applicable learning process<sup>14</sup>.

The need for early detection of behavioral problems related to playing video games can prevent addiction disorder behavior and early intervention can be carried out in adolescents. Choosing the wrong parenting style can also affect the tendency of video game addiction in adolescents, so it is important to assess the type of parenting applied by parents to teenagers who play video games<sup>14</sup>. This study was conducted to determine whether there is a relationship between parenting patterns and tendencies toward video game addiction during the COVID-19 pandemic in adolescents at SMA Muhammadiyah 1 Yogyakarta.

# **METHOD**

This research uses an observational analytical research method with a cross-sectional study approach.

# **Participants**

The research subjects were students of class X SMA Muhammadiyah 1 Yogyakarta who were randomly selected based on the number of absent students from 8 classes X-MIPA and 3

classes X-IPS. There were 168 subjects, consisting of 15 subjects for each MIPA class and 16 subjects for each IPS class. Research subjects aged 14 to 17 years, can read and understand the Indonesian language, and obtain informed consent to participate in the study from their parents/guardians as well as fill out an informed consent to participate in the study. Subjects were excluded if they had not accessed video games in the last 6 months, did not attend virtual meetings during the study, had a history of drug use and psychiatric disorders, and did not fill out the questionnaire completely. The ethical clearance of this research is from the ethics committee of Universitas Ahmad Dahlan (KE/FK/1160/EC/2021)

### **Instruments**

The tendency of video game addiction was measured by the Game Addiction Scale (GAS) instrument compiled by Lemmens (2009) and was first used for students aged 12-19 years<sup>15</sup>. GAS covers seven domains namely; salience, tolerance, mood swings, relapse, withdrawal, conflict and problems. The domain is said to be positive if the average answer from each domain is >3. Based on the 4 main domains (relapse, withdrawal, conflict, and problem), the addiction score will be 12-20, while the non-addiction score will be 0-11. The researcher also tested the validity and reliability of use, where the results of the Pearson's product-moment correlation test showed that the correlation value for all question items was above the r table, with a value range of r count = 0.413-0.758, where the value of r table for the number of samples 161 was 0.155. The results of the reliability test showed that the item items in this questionnaire were reliably used as a measuring tool with a Cronbach's alpha value of 0.907.

Meanwhile, parenting style was measured using the Parental Authority Questionnaire (PAQ) instrument developed by Buri (1991) based on the theory of three types of parenting by Baumrind (1966), namely: authoritarian, democratic, and permissive. The PAQ contains 30 items that have been translated into Indonesian a statement designed to measure the parenting style of both parents in terms of authority and the application of discipline by parents based on the child's point of view<sup>17</sup>. Measurements are taken from the highest number of scores from one of the dimensions. Researchers also tested the validity and reliability of the used in all domains of the questionnaire. The results of the validity and reliability test used in the authoritarian domain are valid and reliable, because the correlation value for all question items is above the r table, with a value range of r count = 0.488-0.711, where the value of r table for the number of samples 161 is 0.155, and the value of Cronbach's alpha 0.828. The democratic domain shows valid and reliable results, because the r-value range = 0.176-0.761, and Cronbach's alpha value is 0.775. The permissive domain shows valid and reliable results because the r-value range = 0.309-0.653, and Cronbach's alpha value is 0.775.

### **Analysis**

Data analysis used the chi-square/fisher exact test, contingency coefficient, and logistic regression test.

### **RESULT**

# Characteristics of research subjects

In this study, 161 subjects played games with most of the age of subjects being 15 years old, namely 117 (72.7%) and most of them were men, namely 111 (68.9%) with games containing elements of violence as much as 81 (50.3%).

Variable		n	%
Ages	14	13	8.1
	15	117	72.7
	16	29	18.0
	17	2	1.2
Gender	Male	111	68.9
	Female	50	31.1
Playing game?	Yes	161	100.0
	No	0	0.0
First-age playing game	< 5 years old	59	37.1
	> 5 years old	100	62.9
Game genres that are often played	Yes	81	50.3
contain elements of action/violence	No	80	49.7
How many days to play the game	1-3 days/week	74	46
	4-7 days/week	87	54
How many hour/days playing game	<3 hours/day	31	19.3
	≥ 3 hours/day	130	80.7
Device used to play the game	Laptop/PC/console	25	15.5
	Smartphone/Tablet/Mo	101	62.7
	bile		
	Both	35	21.7

Table 1. Characteristics of research subjects (n=161)

# Characteristics of the research subject's parents

The characteristics of the parents of the research subjects are mostly intact marital status as many as 151 (93.8%), the education level of the subject's parents is Higher Education as much as 126 (78%), and the income of the parents of the research subjects is in the high-income category as many as 148 (91,9%).

# The distribution of video game addiction tendencies

Table 3 shows the frequency distribution of video game addiction tendencies in Muhammadiyah 1 Yogyakarta High School teenagers as many as 52 (32.3%) of the 161 research subjects who experienced video game addiction tendencies, although most of them belonged to the category of non-addiction behavior, i.e. they did not experience video addiction tendencies. 109 games (67.7%).

Tabel 2. Characteristics of the research subject's parents

Variabel		n	%
Marital status	Married	151	93.8
	Single	10	6.2
Income	<standard< td=""><td>13</td><td>8.1</td></standard<>	13	8.1
	Salary		
	>Standard	148	91.9
	Salary		
Educational Background	Under	35	21.7
	High	126	78.3
Living with	Father/mother	142	88.2
	Other families	19	11.8
Your parents are aware of the activity	Yes	145	90.1
	No	16	9.9
Your parents often give appreciation	Yes	127	78.9
	No	34	21.1
Your parents supervise and limit activities	Yes	116	72.0
outside of learning	No	45	28.0
	1 . 0004		•

Source: primary data, 2021

Table 3. Frequency distribution of video game addiction tendencies behavior based on GAS instrument scores in adolescents at SMA Muhammadiyah 1 Yogyakarta (n=161)

Variable	n	%
Addiction	52	32.3
Non-addiction	109	67.7
Total	161	100.0

Source: primary data, 2021

The type of parenting style of parents and the tendency of video game addiction

In the bivariate analysis test between the type of parenting style of parents and the tendency of video game addiction (table 4), it was found that subjects with the type of authoritarian parenting experienced more behavioral tendencies towards video game addiction, namely 11 (52.4%), as well as the type of permissive parenting. as many as 9 (64.3%), while the type of democratic parenting did not experience addictive tendencies, namely 94 (74.6%). The results of the Chi-Square test found that there was a significant relationship between parenting and video game addiction p=0.001 and C=0.275.

	Add	liction					
Parenting	Add	liction	Non-a	addiction	$\chi^2$	p	С
	n	%	n	%	_		
Authoritarian	11	52.4	10	47.6			
Permissive	9	64.3	5	35.7	13,17	0.001*	0.275
Authoritative	32	25.4	94	74.6			

Table 4. Bivariate analysis between parenting styles and video game addiction tendencies

# Characteristic of video game addiction

The results of the study are presented in Table 6, which shows 44 (39.6%) more men experiencing video game addiction tendencies than women 9 (16.0%) with a significant difference of p=0.003. So it can be said that men have a tendency to experience video game addiction tendencies OR=3.45 times higher than women. It was found that game genres containing elements of violence had 33 (40.7%) tendencies towards video game addiction behavior compared to game genres that did not contain elements of violence 19 (23.8%) with a significant difference of p=0.021. So it was found that game genres that contain elements of violence have a risk of experiencing video game addiction tendencies OR=2.21 times higher than game genres that do not contain elements of violence. The type of hardware used by most of the subjects and has a risk of video game addiction is Smartphone/Tablet/Mobile as many as 28 (27.7%).

The results of the multivariate analysis revealed that the type of authoritarian parenting had a significant effect on the behavior of video game addiction tendencies p=0.003 with OR=6.05. The type of permissive parenting also has a significant effect on the behavior of video game addiction tendencies, namely p=0.004 with OR=6.3. Meanwhile, gender was found to have an effect on the behavior of video game addiction tendencies with p-value = 0.001 with OR=5.3, where the results of the multivariate regression test can be seen in Table 6.

<sup>\*)</sup> significant p<0,05, Chi-Square test

Table 5. Bivariate analysis between other variables and the behavior of video game addiction tendencies

		Ado	diction						
		Addiction Non-addiction		$\chi^2$	p	OR	CI 95%		
		n	%	n	%	-			
Gender	Male	44	39.6	67	60.4	8,81	0,003*	3,45	1,48-8,04
	Female	8	16.0	42	84.0				
Marital status	Married	49	32.5	102	67.5	0,03	1,000\$	1,1	0,28-4,52
	Single	3	30.0	7	70.0				
Educational	Under	8	22.9	27	77.1	1,82	0,177	0.55	0,23-1,32
Background	High	44	34.9	82	65.1				
Income	<umr< td=""><td>5</td><td>38.5</td><td>8</td><td>61.5</td><td>0,25</td><td>0,758</td><td>1,34</td><td>0,42-4,33</td></umr<>	5	38.5	8	61.5	0,25	0,758	1,34	0,42-4,33
	>UMR	47	31.8	101	68.2				
Living with	Father/mother	47	33.1	95	66.9	0,35	0,553	1,38	0,47-4,08
	Other families	5	26.3	14	73.7				
Your parents are aware	Yes	47	32.4	98	67.6	0,01	0,925	1,06	0,35-3,21
of the activity	No	5	31.3	11	68.8				
Your parents often give	Yes	38	29.9	89	70.1	1,55	0,213	0,61	0,28-1,33
appreciation	No	14	41.2	20	58.8				
Your parents supervise	Yes	34	29.3	82	70.7	1,69	0,193	0,62	0,30-1,28
and limit activities	No	18	40.0	27	60.0				
outside of learning									
Burdened with online	Yes	29	30.5	66	69.5	0,33	0,564	0,821	0,42-1,60
school or schoolwork	No	23	34.8	43	65.2				
First age playing game	<5 years old	24	40.7	35	59.3	2,71	0,100	1,76	0,89-3,48
	>5 years old	28	28.0	72	72.0				
Game genres that are	Yes	33	40.7	48	59.3	5,31	0,021*	2,21	1,12-4,35
often played contain	No	19	23.8	61	76.3				
elements of action /									
violence									
Device used to play the	Laptop/PC/con	10	40.0	15	60.0	0,273	-	-	
game	sole								
	Smartphone/Ta	28	27.7	73	72.3				
	blet/Mobile								
	Both	14	40.0%	21	60.0				

<sup>\*)</sup> signifcant p<0,05, Chi-Square test, \$) Fisher exact test

Table 6. Multivariate regression test results that affect the behavior of video game addiction tendencies in adolescents at SMA Muhammadiyah 1 Yogyakarta

В	S.E.	Wald	Df	P	OR	95% C.I.for EXP(B)

							Lower	Upper
Authoritarian	1.801	.573	9.893	1	.002	6.056	1.971	18.605
Permissive	1.847	.644	8.214	1	.004	6.339	1.793	22.410
Gender	1.673	.496	11.376	1	.001	5.330	2.016	14.094

### **DISCUSSION**

# Characteristics of research subjects

Teenagers are considered to be more often and more prone to video game addiction than adults, because adolescence is a period of instability, and tends to be more prone to experimenting with new things<sup>6</sup>. Ibrahim's research (2014) shows that adolescents aged 15-17 years are more dominant in experiencing video game addiction tendencies. Because at the age of 15-17 years, adolescents are experiencing a phase of broader social development, where there is an urge to try new things and there is a sense of wanting to be appreciated or praised. Proven in Wu's research (2020) which shows that games are very easy to become addictive in adolescence because they triggers the reward system in the brain and forms impulsive behavior<sup>16</sup>.

The results of this study indicate that there is a significant change in the behavior of teenagers at Muhammadiyah 1 Yogyakarta High School during the COVID-19 pandemic, where there is an increase in the number of teenagers who have a tendency to become addicted to video games. The results of Luklu's (2020) research conducted before the COVID-19 pandemic showed that there were no students who experienced video game addiction tendencies at SMA Muhammadiyah 1 Yogyakarta <sup>18</sup>. The significant increase in the findings of this study was caused by one of the impacts of the COVID-19 pandemic which triggered adolescents to seek alternative entertainment to overcome boredom and fulfill their social needs. This finding is supported by the large number of subjects (59%) who feel burdened with school and online assignments, thus allowing the subject to play video games as a solution to boredom.

# The type of parenting style of parents and the tendency of video game addiction

The results of this study are in line with Tiwa's research (2019) which found a relationship between parenting patterns and tendencies toward video game addiction in adolescence because parenting plays an important role in determining addiction behavior<sup>19</sup>. Likewise, Yosephine's research (2020) on late adolescents in Jakarta, shows a positive relationship between authoritarian and permissive parenting patterns with video game addiction tendencies, and democratic parenting that is not related to video game addiction tendencies<sup>20</sup>. So it can be said that prior to the COVID-19 pandemic until entering the COVID-19 pandemic, democratic parenting

was a good choice to be able to prevent high school youth from the risk of video game addiction behavior.

# The distribution of video game addiction tendencies

This was done to control for several variables that could affect the tendency of video game addiction and to see which variable has the greater influence. The results of this test prove that although the type of authoritarian parenting, permissive parenting type, gender, parental education, parental appreciation, parental supervision, age at starting playing games, and game genre have statistical significance on the tendency of video game addiction, but the variable Authoritarian parenting, permissiveness and gender in this study have an influence on the tendency of video game addiction.

### Limitation of research

- 1. The limitation of this research is the seriousness of the research subjects in filling out the questionnaire when the research is beyond the reach of the researcher, and no in-depth interviews were conducted, so the data obtained is subjective and only in the form of data on tendencies towards video game addiction so that it can affect the results of the study.
- 2. The weakness of this research is the data obtained using the self-report method the data obtained is subjective and only in the form of data on tendencies towards video game addiction so that it can affect the results of the study.

# **CONCLUSION AND SUGGESTION**

There is a significant relationship between parenting style and the tendency of video game addiction in adolescents at SMA Muhammadiyah 1 Yogyakarta. Authoritarian and permissive, as well as gender are the most influential factors on the behavior of video game addiction tendencies in teenagers at SMA Muhammadiyah 1 Yogyakarta. Teenagers are advised to be vigilant and self-limiting in the use of video games and choose non-violent game genres to avoid video game addiction.

For teenagers who like video games, they can look for alternative entertainment or other activities that are also fun to reduce boredom or modify feelings such as sports or other hobbies, especially during the COVID-19 pandemic. Parents are advised to apply democratic parenting because democratic parents can be firm, and disciplined by giving explanations to teenagers about the rules made by parents. Parents can also invite teenagers to commit to the use of video games, related to the length of play and the type of games accessed (not violent), and to improve the quality of their closeness with teenagers, especially during the COVID-19 pandemic. It is suggested

for schools to increase their role in guiding by providing education and direction to students regarding the use of video games, namely limitations related to time and types of games. For further researchers, it is necessary to have a longitudinal or experimental research design to be able to assess the causal relationship between parenting and video game addiction, thus clinically supporting the results of this study. Psychiatrists and other clinicians can provide promotion, early detection, and treatment for adolescent deviant behavior, namely video game addiction.

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