

Motive on playing online game as predictor of adolescence's problematic online gaming use in makassar

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Abstract—Online gaming may cause deficit on adolescence's academics achievement and social interaction difficulties, thus may be referred as one of a social deviance. Deviation is a set of behavior which able to bring up problematic on daily life. One of the factors that contribute on deviation is individual motive. Motive can be assumed as an energy that may determine one's behavior.

Motives on online gaming could be the predictor of deviation on online gaming. Deviation on online gaming can be referred as *problematic online gaming use*. This study aims to find our *problematic online gaming use* on adolescence as well as motives on online gaming that may predict *problematic online gaming use*. The method of this study is quantitative research method.

Motives for Online Gaming Questionnaire and Problematic Online Gaming Questionnaire measured 301 participants in total. The findings show that tendency on adolescence's *problematic online gaming use* are on moderate category. By multiple regression can be seen that motives on online gaming simultaneously significant predicting adolescence's *problematic online gaming use*, which the contribution online gaming motives are account for 51,6 percent. While social motive, escape motive, competition motive, skill development motive, and fantasy motive partially significant predicting *problematic online gaming use*. Coping motive and recreation motive partially not significant predicting *problematic online gaming use*.

Keywords—*playing online games motive; problematic online gaming use; adolescence.*

I. INTRODUCTION

Adolescence as young generation should be prepared and preparing their self to contribute on their nation's development. This statement based in the adolescence stage, which is the crisis age on academic aspect [1]. Social and academics pressure makes the adolescence have more responsibility on academics aspect. Therefore, adolescence whose age is in school age should prioritize study as their main activity [1].

Study as the main activity unfortunately does not occurred on some adolescence. Adolescence mostly spend their time on

playing video games, therefore, other of their activity will decrease even affecting on their adult age [2]. Anand also mentioned that the increasing of video game playing time could affect on drop the academics performance [3]. Another effect of video game addiction is inclination of individual psychological and social stress [4].

Game online would have bad influence, but at another side it is needed to fulfill someone's need of entertainment. Therefore, it should be considered first on players characteristic from motivational perspective by exploring the need and motives behind it without take concern on the beneficial or the negativity for someone [5]. This motive may be considered as energy and could be the determinant factor of someone's behavior.

The previous research shows that motive is a determinant factor of someone's behavior. It shows that in drug taking behavior, the motive mediates other determinant factor of this behavior, such as personality and hope [6] [7]. Personality and other determinant aspects could determine behavior by motive mediation that motivates someone. Motive on online gaming is as important to be concerned. Thus, motive on online gaming may be the predictor of *problematic online gaming use* [5].

There seem to be a tendency that adolescence neglects their main task as a student. By this statement, in issue arise on gap of online gaming use. This is important to be considered since adolescence is a crisis age that can affect on their success in the future. Therefore, this study would like to know the motives on adolescence online gaming that can cause *problematic online gaming*.

This study aims to know the illustration of adolescence's *problematic online gaming use* and understanding the motives that can predict *problematic online gaming use*. The theoretical advantages of this research is to expand the field of psychological study especially on developmental psychology and clinical psychology about *problematic online gaming use* adolescence and could be a literature review which is

beneficial for the readers that are interested in online gaming study. The practical advantages of this study is to give information for parents and social environment to guide the development of adolescence, informing that it is important to create a psycho education to prevent game online player to be *problematic online gaming*. Furthermore, adolescence should understand to use the game online facilitation as an entertaining media. This understanding is very crucial so that adolescence will not have severe problem. Thus, adolescence could optimize their capacity as a generation that contributes on national development.

II. LITERATURE REVIEW

A. Problematic Online Gaming Use

Person who plays game online intensely and thinks that game online is not only as entertaining media can be seen from their tendency on *problematic online game*. *Problematic online gaming use* (POGU). It is an issue, which related significance on online game playing, especially on adolescence and young adult [2]. *Problematic online gaming* as an overusing and may disrupt individual daily life [8]. Some factor that cause someone have *problematic online gaming use* may vary, such as social economic [9], gender [10] [11] [12], attraction disturbance [13], stress coping [13] [14], less social support [13], need fulfillment [15].

Papay, et al. [16] mentioned individual problem related to online gaming as *problematic online gaming use*. *Problematic online gaming use* can be seen from fulfillment of some criteria, which is *preoccupation, immersion, withdrawal, overuse, interpersonal conflict, and social isolation*.

B. Playing Online Games Motive

The attraction of game online is at the potency of game online on fulfilling the psychological need, which can be conceptualized as motive on online gaming [17]. Every human has different motive as a factor that cause him or her to play online game. Motive be a crucial aspect to understand the nature of online gamer. Motive can be seen as a basic component from a form of motivation to play [5].

Demetrovics, et al. [5] find out the motives on online gaming, which is: *social, escape, competition, coping, skill development, fantasy, and recreation*. Those seven motives were arising from the findings of study that had been conducted on online game player. Those motives can be found on every individual, simultaneously or partially. These motives also were reported to predict attitude and behavior on online gaming [18].

III. METHOD

A. Participants

The population on this research is game online player in Makassar. Participants were obtained by purposive sampling in 301 participants by the criteria as a student in the age between 13-15 year's old, active on online gaming up until now, and live in Makassar.

B. Procedures

The data were collected at two online gaming centre and three Junior High School, which located near the game center. Data were collected individually at the game centre, where the participant were given questionnaire and were explained the aim of the study, as well as providing informed consent as a prove of participants willingness to fill the questionnaire.

Data collecting at school were held classical at the class after got permission from the school. Introduction were delivered first related to the purpose of study and the confidentiality of the data. Next, questionnaire was given to the participant as well as explaining about informed consent before further instruction. If the participant agrees to participate in this study, instruction on filling the questionnaire were explained and if there is any inquiry can be directly delivered to the instructor. The questionnaire then was rechecked after it was completely filled, to check on if there is no empty answer left. The type of the questionnaire is in a booklet form.

C. Measures

The instrument that were used in this study are two scales similar to *likert 5-points* scale. Both scales were adaptation scale, where the adaptation procedure is firstly asked for permission from the scale owner. Secondly, translate it into Indonesian then translate back to English (Language that were adapt). After the adaptation procedure, next is validity and reliability process on both scale. After the scale were arranged, validity and reliability test were conducted start from legibility test, content validity, until try out the test on 203 participant candidates for the construct validity and the reliability of both instrument. Construct validity were conducted by *Confirmatory Factor Analysis* (CFA) by using *Lisrel 87 Software*. Item were stated valid if the result of CFA, *loading* factor direction is positive and can be interpreted as the score is $>0,30$, as well as the *t-value* $>1,96$, which means it can measured a *trait* or a theoretical construct that is about to measure. As for the practical rules are, *loadings* above 0,71 *excellent*; $>0,63-0,71$ *very good*; $>0,55-0,63$ *good*; $>0,45-0,55$ *fair*; and $>0,32-0,45$ *poor* [19]. Reliability testing by seeing the value of *Cronbach's Alpha* using *SPSS*.

The first scale is *Problematic Online Gaming Questionnaire* (POGQ) which is made by Papay, et.al and were modified for this research [16]. POGQ scale consist of 12 items and were add more 12 items thus in total are 24 items. Based on the CFA result, all items were valid since the direction of *loading* factor is positive and can be interpreted as the value is $>0,30$, as well as *t-value* $>1,96$, which means that those 24 items are able to measure a trait or a theoretical construct that is about to measure. Next, *Cronbach's Alpha* value is 0,942. It shows that those scales have a reliable measurement.

TABLE III.1

Item	CFA Result on Problematic Online Gaming Scale				
	Loading Factor	Interpret	Std. Error	t-value	Information
1	0,74	Excellent	0,07	10,88	Valid item
2	0,56	Good	0,08	7,08	Valid item
3	0,73	Excellent	0,07	10,50	Valid item
4	0,41	Poor	0,08	5,47	Valid item
5	0,50	Fair	0,07	6,77	Valid item
6	0,71	Very good	0,07	10,86	Valid item
7	0,88	Excellent	0,07	13,01	Valid item
8	0,71	Very good	0,11	6,52	Valid item
9	0,68	Very good	0,07	9,68	Valid item
10	0,77	Excellent	0,07	11,17	Valid item
11	0,43	Poor	0,08	5,02	Valid item
12	0,77	Excellent	0,06	11,94	Valid item
13	0,66	Very good	0,07	9,57	Valid item
14	0,80	Excellent	0,09	9,19	Valid item
15	0,69	Very good	0,07	9,81	Valid item
16	0,73	Excellent	0,07	10,53	Valid item
17	0,87	Excellent	0,08	10,86	Valid item
18	0,84	Excellent	0,07	12,70	Valid item
19	0,48	Fair	0,07	6,60	Valid item
20	0,64	Very good	0,08	7,86	Valid item
21	0,66	Very good	0,07	9,24	Valid item
22	0,72	Excellent	0,07	10,28	Valid item
23	0,75	Excellent	0,08	9,59	Valid item
24	0,77	Excellent	0,07	11,24	Valid item

Second scale is motive on online gaming scale, which were adapted from a scale that were made by Demetrovics et. al. *Motives for Online Gaming Questionnaire (MOGQ)* [8]. This scale was consisting of 7 dimensions and 27 items. Regarding to the CFA result, all items were valid because the loading factor direction is positive and can be interpreted since the value is $>0,30$, as well as the $t\text{-value} > 1,96$, which means that these 27 items can measured the trait or theoretical construct which were about to measure. Next, the *Cronbach's Alpha* value is 0,941. It means that the scale has reliable measurement.

TABLE III.2

Item	CFA Result on Motives for Online Gaming Scale				
	Loading Factor	Interpret	Std. Error	t-value	Information
1	0,87	Excellent	0,06	14,91	Valid item
2	0,51	Fair	0,08	6,67	Valid item
3	0,74	Excellent	0,07	10,93	Valid item
4	0,52	Fair	0,09	6,08	Valid item
5	0,89	Excellent	0,07	12,91	Valid item
6	0,53	Fair	0,07	7,39	Valid item
7	0,78	Excellent	0,06	12,47	Valid item
8	0,83	Excellent	0,06	13,73	Valid item
9	0,78	Excellent	0,08	10,05	Valid item
10	0,72	Excellent	0,07	10,66	Valid item
11	0,68	Very good	0,08	8,19	Valid item
12	0,74	Excellent	0,07	10,89	Valid item
13	0,75	Excellent	0,07	11,14	Valid item
14	0,89	Excellent	0,06	14,87	Valid item
15	0,65	Very good	0,07	9,79	Valid item
16	0,71	Very good	0,08	9,26	Valid item
17	0,58	Good	0,07	8,17	Valid item
18	0,60	Good	0,08	7,64	Valid item
19	0,76	Excellent	0,07	10,20	Valid item
20	0,87	Excellent	0,06	13,32	Valid item
21	0,83	Excellent	0,06	13,47	Valid item
22	0,82	Excellent	0,06	13,65	Valid item
23	0,42	Poor	0,08	5,46	Valid item
24	0,79	Excellent	0,07	11,98	Valid item
25	0,69	Very good	0,08	8,46	Valid item
26	0,63	Good	0,07	9,16	Valid item
27	0,64	Very good	0,07	9,40	Valid item

IV. RESULT

The result of this study shows that the tendency on *problematic online gaming* of 301 adolescence mostly is at moderate level accounts for 64%, low level about 19%, and high level at 17%. Boys have tendency on *problematic online gaming* higher than girls do.

The analysis method of this research is multiple regressions. *IBM SPSS 20 for windows* where use for the statistical testing. Mayor hypothesis in this study are as follow:

Ho: Motive on playing online gameis not significantly predicting the *problematic online gaming use*

Ha: Motive on playing online game is significantly predicting the problematic online gaming use

First analysis was operated by seeing the determination coefficient (*R Square*) which illustrates how big is the contribution of motive on playing online gaming on *problematic online gaming*. Table below shows the result of the multiple regression analysis:

TABLE IV.1

Model	Multiple Regression Analysis Determination coefficient			
	R	R Square	Adjusted R Square	Std. Error of the Estimate
Regression	,718	,516	,504	13,407

Table IV.1 shows that the value of determination coefficient (*R Square*) is about 0,516. It means that the predictors were simultaneously predicting *problematic online gaming use* for 51,6%.

The analysis that was operating next is coefficient regression testing simultaneously or F test by seeing the Anova table. F test was conducted to know the significant prediction of independent variable on dependent variable.

TABLE IV.2

Model	F Test Result Multiple Regression Analysis	
	F	Sig.
Regression	44,569	,000

Regarding to the F test table above, it was found out that F is accounts for 44,569 and the significant value is $p < 0,05$. So, it can be concluded that every seven predictors from motive on playing online game variable simultaneously can predict *problematic online gaming use* variable.

Next, statistical test also were done to test the minor hypothesis. The minor hypothesis of this research is listed below:

- Ho₁: Social motive is not significant predicting *problematic online gaming use*
Ha₁: Social motive is significant predicting *problematic online gaming use*
- Ho₂: Escapemotive is not significant predicting *problematic online gaming use*
Ha₂: Escapemotive is significant predicting *problematic online gaming use*
- Ho₃: Competitionmotive is not significant predicting *problematic online gaming use*
Ha₃: Competitionmotive is significant predicting *problematic online gaming use*
- Ho₄: Coping motive is not significant predicting *problematic online gaming use*
Ha₄: Coping motive is significant predicting *problematic online gaming use*
- Ho₅: Skill development motive is not significant predicting *problematic online gaming use*

Ha₅: Skill development motive is significant predicting *problematic online gaming use*

f. Ho₆: Fantasy motive is not significant predicting *problematic online gaming use*

Ha₆: Fantasy motive is significant predicting *problematic online gaming use*

g. Ho₇: Recreation motive is not significant predicting *problematic online gaming use*

Ha₇: Recreation motive is significant predicting *problematic online gaming use*

Statistical testing was done to predict the significance on each predictor (regression coefficient testing partially) is conducted by using the result of t testing of coefficient table. Below are the results of t test from multiple regression analysis:

TABLE IV.3

Predictor	T Testing Multiple Regression Analysis Result			
	Unstandardized Coefficients B	Standardized Coefficients Beta	T	Sig.
(Constant)	11,166		2,651	,008
SOCIAL	,877	,198	3,420	,001
ESCAPE	1,474	,279	4,974	,000
COMPETITION	1,010	,216	3,779	,000
COPING	-,177	-,030	-,483	,629
SKILLDEV	,571	,118	2,055	,041
FANTASY	,595	,126	2,287	,023
RECREATION	-,045	-,006	-,106	,915

The table above shows the significance value of each predictor. Significance value of social is $p < 0,05$, thus social is significant predicting *problematic online gaming*. The second predictor, escape, has the significance value of $p < 0,05$, thus escape is significant predicting *problematic online gaming*. The third predictor, competition, has the significance value of $p < 0,05$, thus competition is significant predicting *problematic online gaming*. Fourth predictor, coping has the significance value of $p > 0,05$, thus coping is not significant predicting *problematic online gaming*. Fifth predictor, skill development has the significance value of $p < 0,05$, thus skill development is significant predicting *problematic online gaming*. Sixth predictor, fantasy, has the significance value of $p < 0,05$, thus fantasy is significant predicting *problematic online gaming*. Seventh predictor, recreation, has the significance value of $p > 0,05$, thus recreation is not significantly predicting *problematic online gaming*.

V. DISCUSSION

The *problematic online gaming user* is more likely to be seen in boy adolescence than girls are. Previous study also mentioned that the presentation of boy adolescence is higher

on *problematic* since boys have higher addiction on *video games* [4] [16].

This finding found out that motive is simultaneously predicting adolescence exposure on *problematic online gaming use*. Previous study also mentioned that motives on using internet could predict individual exposure on internet, affinity, and satisfaction [20]. Whang, Lee, & Chang [21] also explained that the reason or motive on using internet is an important predictor for internet addiction. Therefore, previous research can strengthen the statement that motive is able to predict behavior.

Predictors of online gaming motive if seen partially, it can be seen that five predictors can significant predict the *problematic online gaming*, which is social motive, escape motive, competition motive, skill development motive, and fantasy motive. While other two predictors, which is coping motive and recreation motive, is not significant predicting *problematic online gaming*.

The limitation of this research is the uneven sampling among the online gaming player from game centre and school. One of the sample criteria, which is actively playing online game is also not specified. The data distribution may not represent the population and affecting on the result of this research that can only applied on the research sample since it didn't use random sampling technique.

Based on the process and findings of this study, it is suggested for the further research who is interest in the same topic to find out the motive difference between adolescence who have high tendency and low tendency. It is also suggested to study on another psychological variable, which may predict those tendencies.

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