

The Effect of Smartphone Usage Intensity on Early Childhood's Egocentric Behavior and Aggressiveness at Smart Start Preschool Pluit Timur Raya

Teen Dian Novita Sari

Universitas Persada Indonesia Y.A.I

ABSTRACT

This study aims to determine the relationship between the intensity of gadget use and egocentric behavior and aggressiveness in early childhood. The data collection method for this study used a census sampling technique, which means that the population can still be reached, namely 70 students. The measuring instrument used was a scale of smartphone use intensity, egocentrism and aggressiveness which were then analyzed using SPSS. The results of this study indicate that smartphone use affects children's egocentric behavior with the results of sig. value = 0.028 <0.05 and on children's aggressive behavior with the results of sig. value = 0.007 <0.05. The higher the intensity of smartphone use in children, the greater their egocentric and aggressive behavior. Conversely, the lower the intensity of smartphone use, the lower the egocentric and aggressive behavior.

Keyword: *Intensity Of Smartphone Usage, Egocentric Behavior, Aggressive Behavior*

Corresponding author

Nama: Teen Dian Novita Sari

Email: teendian@gmail.com

INTRODUCTION

Childhood is a very important period and cannot be repeated. This period is often referred to as the "golden age". It is called the Golden age because this period occurs only once in the development of a child's life and this growth period is progressive, systematic and continuous. One of the stimulations needed in the golden age/period of a child is playing activities, because in reality playing is a child's world, a world full of spontaneity and fun. When playing, children learn to interact with peers and adults. They develop social skills such as sharing, empathy, cooperation, and communication.

Humans as social beings, in essence and ideally interact with other social beings in living their daily lives. But it is very unfortunate that along with the rapid and massive development of technological sophistication today, we can see the phenomenon that is happening today, not a few humans interact more often with existing technological objects. One of them is currently happening almost all over the world, namely the smartphone addiction pandemic, where this smartphone addiction pandemic is not only affecting adults and adolescents, but even now we can see many on social media that educate the dangers

caused by using smartphones, which are currently on alert one. Children who experience smartphone addiction in their brains will produce excessive dopamine hormones which disrupt the function of the Pre Frontal Cortex.

According to the American Psychological Association (APA), the pre-frontal cortex is the foremost part of the cerebral cortex in the human brain that is responsible for matters relating to human behavior such as attention, planning, working memory, emotional expression, and social behavior that is in accordance with social norms. One of the negative impacts that occurs in the social and emotional development of children who experience smartphone addiction is the emergence of egocentric behavior and aggression in a child that can interfere not only with the child, but can also hurt other parties who interact with him.

According to Piaget, it is related to the ability to speak and think that is directed at personal needs. While egocentrism is defined as the tendency to judge objects or events based on personal interests and become less sensitive to the interests or things that concern others; according to Piaget, it is the inability to understand that others also have interests or views that may differ from those of oneself (Kartono & Gulo in Chaplin, 2003). Shaffer (2009) defines egocentrism as the tendency to view the world from one's personal perspective without realizing that others may have different points of view.

Almost every child is naturally egocentric. Egocentric is when a child focuses and discusses himself (Rohayati, 2018). In addition, egocentricity in early childhood is feeling the most right, wanting to win alone and his wishes must be followed. Parents must provide understanding to children to become good social beings who obey existing regulations by giving rewards if children are able to control their ego.

Children have the nature of imitating what they get and feel. And one of the negative interaction patterns that is generally seen when children play together is aggressive behavior. David (2009) said the simplest definition and supported by behaviorism or learning, that aggression is any action that hurts or injures others.

Baron (in Yeza, 2018) said that aggression is an individual's behavior that is intended to hurt or harm another individual who does not want such behavior. Children will react aggressively if they are involved in conflict with their peers. Bee & Mitchell, 1984 (in Yeza, 2018) explained that this interaction pattern is seen in the behavior of hitting, hurting, biting, kicking, pushing, pinching, and throwing things and so on.

In line with this, Hurlock (2004) mentions various behavioral patterns in children aged 2-6 years or also known as early childhood, namely the existence of social behavioral patterns such as imitation, competition, cooperation, sympathy, empathy, social support, sharing, friendly behavior, while non-social ones such as negativism, powerful behavior, thinking about oneself, being selfish, destructive, sexual conflict, prejudice, and aggression.

There are several factors that influence the occurrence of aggression, including; stress, deindividuation, power, effects of weapons, provocation, alcohol and drugs, environmental conditions, gender, physical condition, mass media, and thought deviations (Yulikhah et al., 2019). Therefore, this study will explore how the intensity of smartphone use affects egocentric behavior and aggression in early childhood. Therefore, this study will

explore how the intensity of smartphone use affects egocentric behavior and aggression in early childhood where excessive use of smartphones or smart phones can have a negative impact on children's behavior.

As time goes by, children inevitably become connected to increasingly popular smartphones. Nowadays, it is not uncommon to see young children already proficient in using smartphones (Zaini & Soenarto, 2019). As time goes by, children cannot be separated from smartphones that are increasingly widely circulated. So it is not strange to see young children already proficient in using smartphones.

The Great Dictionary of the Indonesian Language defines intensity as the degree or measure of intensity. In this study, the intensity referred to is the frequency and duration of your smartphone use. The intense nature of smartphone use and the applications often played by children should hinder their participation.

The intensity of smartphone use that leads to smartphone addiction in children is manifested in the form of tantrums when asked to stop using smartphones, not answering parents' calls while using smartphones, and when children arrive at school, their academic grades decline. Children may use smartphones, but there are concerns about the intensity or duration of use that children have, parents must be aware of which applications can be used by children, and which cannot so that this needs to be accompanied by adults. Based on this background, this study analyzes the Effect of Smartphone Use Intensity on Egocentric Behavior and Aggression in Early Childhood at Smart Start Preschool Pluit Timur Raya.

METHOD

The type of research used in this study is quantitative research. Quantitative research method is one type of research whose specifications are systematic, planned and clearly structured from the beginning to the creation of the research design (Suryana, 2015). This research is included in Associative research, associative research aims to determine the relationship between 2 or more variables, through this research a theory can be built that can function to: explain, predict and control a symptom.

A. Identification of Research Variables

The variables used in this study are:

1. There are two dependent variables in this study, namely Egocentric Behavior (Y1) and Aggressive Behavior (Y2)
2. The independent variable in this study is the intensity of smartphone use (X1)

B. Population and Sampling Techniques

1. Population

Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics that are applied by researchers to be studied and then conclusions are drawn. Population is the entirety of the research subjects. The population in this study were all Smart start preschool students totaling 70 students.

2. Sample

Sampling using saturated sampling technique which means the sample determination is done because the population can still be reached by the researcher. The researcher visited Smart Start Preschool and asked the students there to be willing to be research samples.

C. Instruments

In this study, the data collection instrument is a questionnaire. A questionnaire is a data collection technique carried out by giving a set of written questions or statements to respondents to be answered. This method is an efficient data collection technique if the researcher knows for sure the variables to be measured and knows what can be expected from the respondents (Suharsimi, 2013). In addition, the questionnaire is also suitable for use when the number of respondents is quite large and spread over a wide area. The questionnaire in this study was used by researchers to obtain data on the intensity of smartphone use, egocentric behavior and aggressiveness in early childhood.

D. Validity & Reliability Test

Validity test is to determine the level of validity of the instrument value (questionnaire) used in data collection. This validity test is carried out to determine whether the items presented in the questionnaire are truly able to express with certainty what will be studied. This validity test is obtained by correlating each indicator score with the total score of the variable indicator, then the correlation results are compared with the critical value at a significance level of 0.05. The criteria for determining the validity of a questionnaire are as follows

If $r_{\text{count}} > r_{\text{criteria}} (0,1982)$ then the statement is declared valid.

If $r_{\text{count}} < r_{\text{criteria}} (0,1982)$ then the statement is declared invalid

An instrument is said to be consistent if it has a high reliability value, if the test created has consistent results in measuring what it wants to measure (Paul M. Muchinsky, 2016). Test the reliability of the instrument using SPSS 24 for Windows. The basis for decision making on reliability testing can be seen below:

Consistent : $\alpha > r_{\text{table}}$

inconsistent : $\alpha < r_{\text{table}}$

E. Linear Regression Analysis

This analysis is used to determine how much influence the independent variable, namely: Intensity of smartphone use (X1), has on the dependent variables, namely Egocentric Behavior (Y1) and Aggressive Behavior (Y2). The multiple linear regression equation is as follows:

Formula :

Equation 1 :

$$Y1 = a + b1X1 + e$$

Equation 2 :

$$Y2 = a + b1X1 + e$$

Information :

$$Y1 = \text{Egocentric Behavior}$$

- Y2 = Aggressive Behavior
- a = Konstanta
- b1 = Regression coefficient of variable X1
- X1 = Intensity of Smartphone Usage
- e = Standard Error

F. Hypothesis Testing

1. t Test

The t-statistic test is basically used to show how far the influence of the independent variable individually on the dependent variable (Priyatno, 2014). This test is carried out with a t-test at a significance level (α) of 0.05% with the following provisions:

- a) If the sig t value is > 0.05 then this variable does not have a significant effect.
- b) If the sig t value < 0.05 then the variable has an effect significantly (Ali Muhson, 2014).

2. F statistical test

- a) The F statistical test basically shows whether all independent variables included in the model have a joint or simultaneous influence on the dependent variable (Priyatno, 2009). This test is carried out if the sig F value > 0.05 then the influence between the independent variables on the dependent variable does not have a significant effect.
- b) If the sig F value < 0.05 then there is a significant influence between the independent variable and the dependent variable (Ali Muhson, 2014).

3. Coefficient of Determination (R2)

The coefficient of determination (R2) basically measures how far the research model is able to influence Y by looking at the percentage that produces how much influence it has on the research being conducted.

FINDING AND DISCUSSION

RESULT

Based on research that the author has conducted by distributing questionnaires to randomly selected respondents, the author obtained data related to the respondents' identities, such as gender.

A. Respondents

Based on the respondent's gender, the results of data analysis using the IBM SPSS Statistics version 24 program for respondent identity based on gender are as follows :

Table 4. 1 Respondent Identity Based on Gender

Gender	Frequency	Percentage (%)
Men	40	57,1
Women	30	42,9
Total	70	100

From table 4.1 above, it can be seen that of the 70 respondents sampled in this study, the majority of respondents were male, totaling 40 respondents (57.1%), while the remaining 30 respondents (42.9%) were female.

B. Analysis

The regression analysis in this study aims to obtain the estimated results of the hypothesis, namely the effect of the intensity of smartphone use on children's egocentric and aggressive behavior. The calculation results for the multiple linear regression analysis in this study can be seen in Table.

Table 4.2 Multiple Linear Regression Results (Y1)

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	55.886	5.898		9.476	.000
	X1	.115	.210	.066	.546	.028

a. Dependent Variable: Y1

Based on Table 4.3 above, the regression equation is obtained :

$$Y2 = 78,820 + 0,076X_1$$

Based on the results of the equation above, it can be concluded that the Intensity of Smartphone Use (X1) has a positive effect on Aggressive Behavior (Y2) with a regression coefficient of 0.076. The existence of this positive relationship means that the Intensity of Smartphone Use and children's Aggressive behavior have a unidirectional relationship. This value can be interpreted that if the variable of the intensity of smartphone use increases by one unit, the magnitude of the child's Aggressive behavior will increase by 0.076 assuming all other independent variables are constant/fixed.

C. Hypothesis testing

This study uses a t-test (partial). The results of the t-test (partial) in this study can be seen as follows:

D. Hypothesis 1:

The Influence of Smartphone Usage Intensity on Children's Egocentric Behavior

a) Hypothesis 1

Ho : There is no significant influence of the intensity of smartphone use on egocentric behavior.

Ha : There is a significant influence of the intensity of smartphone use on children's egocentric behavior.

b) Criteria

If sig. research < 0.05 then Ho is rejected and Ha is accepted.

If sig. research > 0.05 then Ho is accepted and Ha is rejected.

c) Results

Hypothesis testing shows a significance level of $0.028 < 0.05$ so that H_0 is rejected and H_a is accepted.

Table 4.4 t-test results X_1 with Y_1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	55.886	5.898		9.476	.000
	X1	.115	.210	.066	.546	.028

a. Dependent Variable: Y1

d) Conclusion

Based on the calculations above, it can be concluded that hypothesis 1, which states "There is a significant influence of the intensity of smartphone use on aggressive behavior," is proven.

E. Hypothesis 2: The Influence of Smartphone Usage Intensity on Children's Aggressive Behavior

a) Hypothesis 2

H_0 : There is no significant influence of the intensity of smartphone use on children's aggressive behavior

H_a : There is a significant influence of the intensity of smartphone use on children's aggressive behavior

b) Criteria

If sig. research < 0.05 then H_0 is rejected and H_a is accepted.

If sig. research > 0.05 then H_0 is accepted and H_a is rejected.

c) Result

Hypothesis testing shows a significance level of $0.007 < 0.05$ so that H_0 is rejected and H_a is accepted.

Table 4.5 t-test results X_1 with Y_2

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	78.820	6.829		11.542	.000
	X1	.076	.243	-.038	-.311	.007

a. Dependent Variable: Y2

d) Conclusion

Based on the calculations above, it can be concluded that hypothesis 2 which states "There is a significant influence of the intensity of smartphone use on aggressive behavior" is proven.

F. Value of determination coefficient (R²)

Has a range of 0-1. The greater the coefficient of determination indicates the greater the ability of the independent variable to explain the dependent variable..

Table 4.7 Results of Determination Coefficient Test (R²) Y1

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.066 ^a	.004	.110	2.69024	.004	.298	1	68	.028

a. Predictors: (Constant), X1

Based on the table above, the results of the coefficient of determination in the regression model with an Adjusted R² value of 0.110, it can be interpreted that 11 percent of children's egocentric behavior can be explained by the intensity of smartphone use. While the remaining 89 percent is influenced by other variables that are not included in this research model.

Table 4.7 Results of Determination Coefficient Test (R²) Y1

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.038 ^a	.001	.132	3.11487	.001	.097	1	68	.007

a. Predictors: (Constant), X1

Based on the table above, the results of the determination coefficient in the regression model with a value of *Adjusted R²* of 0.132, it can be interpreted that 13.2 percent of children's aggressive behavior can be explained by the intensity of smartphone use. While the remaining 86.8 percent is influenced by other variables that are not included in this research model.

Based on the results of the research conducted, hypothesis testing shows that the intensity of smartphone use (X1) has an effect on children's learning motivation (Y1) with the results of the sig. value analysis = 0.028 < 0.05 and on children's aggressive behavior (Y2) with the results of the sig. value analysis = 0.007 < 0.05.

The higher the intensity of smartphone use of students, the higher the egocentric and aggressive behavior, conversely, the lower the intensity of smartphone use, the lower

the egocentric and aggressive behavior. So that with the intensity of smartphone use in students, it can foster egocentric and aggressive influences in children.

DISCUSSION

The Effect of Smartphone Usage Intensity on Children's Egocentric and Aggressive Behavior Based on the results of the research conducted, hypothesis testing shows that the Intensity of Smartphone Usage (X1) has an effect on children's learning motivation (Y1) with the results of the sig.= 0.028 <0.05 and on children's aggressive behavior (Y2) with the results of the sig.= 0.007 <0.05.

The higher the intensity of students' smartphone use, the higher the egocentric and aggressive behavior, conversely, the lower the intensity of smartphone use, the lower the egocentric and aggressive behavior. So that with the intensity of smartphone use in students, it can foster egocentric and aggressive influences in children.

In conducting this research, the author has limitations including:

1. The author only uses the questionnaire method so that the conclusion is only based on data collected in writing.
2. Limited communication between the author and respondents, but this can help in supervising each student's class teacher.
3. The object carried out by the author is only at Smart Start Preschool, so conclusions cannot be drawn for all schools in Indonesia.
4. This study only analyzes three variables, namely the intensity of smartphone use, egocentric behavior and aggressive behavior, while there are still many other variables that can describe the child's condition.
5. Time constraints make it difficult for the study to collect respondent data.

CONCLUSION

Based on the results of the analysis and hypothesis testing that has been carried out, the following conclusions were obtained:

1. There is a significant influence of the intensity of smartphone use on Egocentric Behavior. Hypothesis testing shows a significance level of 0.028 <0.05 so that H_0 is rejected and H_a is accepted. Thus, it can be concluded that the intensity of smartphone use has an effect of 11% on children's egocentric behavior.
2. There is a significant influence of the intensity of smartphone use on aggressive behavior. Hypothesis testing shows a significance level of 0.007 < 0.05. Thus, it can be concluded that the intensity of smartphone use has an effect of 13.2% on children's aggressive behavior.

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