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# Paper 1

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# THE RELATIONSHIP BETWEEN THE USE OF GADGET AND EMOTIONAL DEVELOPMENT OF PRESCHOOL CHILDREN

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## ABSTRACT

Emotional development among preschool children is influenced by several factors. Preschool children are often exposed to gadgets. This study is intended to investigate the relationship between the use of gadgets and emotional development of preschool children. This research used analytic observational design with cross sectional approach. Sampling technique used probability sampling by cluster sampling which amounted to as many as 104 respondent with two research sites at Al-Fitroh and Budi Mulia kindergarten in Surabaya. The research instrument was questionnaires assesment both the use of gadgets of which validity and reability test has been under taken. Emotional development as measured by SDQ (Strenght Difficulties Questionnaire) questionnaire. The result of the research intensity and attitude use of gadget in preschool children were mostly found to experience in the moderate category. Emotional development is mostly in the borderline category. Based on the result of the Spearman's Rho test, which obtained a  $p$  value = 0.000 ( $p < 0,05$ ) with OR value = -0.363 which means that use of gadget and was less related with emotional development of preschool children. Use of gadget among preschool children should be controlled and assisted. Parent can by distract the children by introducing traditional games. This can be a way for parents to stimulate and develop emotional skills of children.

**Keywords:** *Gadget, Emotional Development, Pre-School Aged Children, Parent's Role*

## INTRODUCTION

Excessive use of gadgets can interfere with child development, especially in preschool children. In preschool children, emotional development is one of the most important factor in the development of children because child's ability to manage emotions and recognize emotions must be developed when the children enter the environment that has an influence on children's behavior. Emotions can take the form of feelings of pleasure, fear, anger and so on. Emotional development in early childhood is marked by the emergence of evaluative emotions in the sense of pride, shame, and guilt, where the emergence of emotions in children shows that children have begun to understand about assessing their behaviour (Nurmalitasari, 2015).

In the research journal of the American Association of Pediatrics (AAP) concluded that almost all children (96.6%) used cellular devices. Children have been exposed to cellular devices since less than 1 year old and have had mobile devices since the age of 4 years. The

reason parents give mobile devices to children when parents are doing work (70%), to keep children calm (65%), and time before bedtime (25%) (Kabali *et al.*, 2015).

From the description above, it is evident that preliminary study is necessary to detect the use of gadgets in preschool children. The preliminary study was conducted at Al-Fitroh Surabaya Kindergarten and Budi Mulya Kindergarten Surabaya. The results of the study indicate the existence of the phenomenon of the use of gadgets among preschool children. The results of interviews and approaches conducted for some parents who have preschool children aged 4-6.5 years, said that their children have known gadgets and played with gadgets for a period of no more than 1 to 4 hours a day while at home. Almost all parents said that their children have started to recognize gadgets from the age of 2-4 years and parents also said that their children use gadgets more often to play games applications and watch YouTube videos.

The use of gadgets by preschool children is influenced by several factors, including cultural factors, social factors, and personal factors. In addition, according to Fadilah, (2015) factors affecting preschool children are exposure to advertisements on television and social media. The gadget also displays interesting features and sophistication of the gadget. If these factors are not taken care of then there will be no change in the future, it will ultimately have a deep impact on the preschool children.

According to Page *et al.*, (2010) the duration in the use of screen-based media gadgets for children should not be more than one or 2 hours per day. The tendency of excessive use of gadgets will cause dependence whose effects can interfere with interaction with the environment, reduced empathy and sympathy, and reduced family time. So the attention of the children who are addicted to gadgets will be focused on cyberspace and when the demand for children playing gadgets is not met or if separated from the gadget, then the child will emerge emotions such as anxiety, sadness, disappointment, anger and nervousness. So, one form of the negative influence of gadgets on children is that they are out of control emotionally.

When viewed from the point of view of mental health science, the child's growth and development process can naturally be disrupted due to excessive use of gadgets, therefore children are strongly discouraged from using gadgets. We recommend that parents after using any gadget must put it away from the children not just any place because this will allow children to play gadgets without the knowledge of parents. Parents can turn away their attention from gadgets by inviting them to play with their friends, introducing traditional games can stimulate to develop cooperation, socialize positively, have empathy for their friends. So the introduction of traditional games in the school environment is very effective (Fadilah, 2011). By playing children can express their feelings and ideas in dealing with real life and can regulate the emotions and feelings during play. This will encourage children to better understand themselves. It is likely that traditional games have a more positive impact on emotional skills for children.

**METHODOLOGY**

This research uses quantitative research, analytic observational method with the cross sectional approach. The population in this study was parents who had preschool children (3-6 years old) who used gadgets at

Al-Fitroh Kindergarten and Budi Mulya Kindergarten, Surabaya, totaling 140 students. The number of samples in this study amounted to 104 people. The sampling technique used in this study was probability sampling with cluster sampling. The use of gadget was estimated by the use of questionnaire instrument that has been tested for validity and reliability. Emotional development using a questionnaire is SDQ (Strengths and Difficulties Questionnaire).

**RESULTS AND DISSUCION**

**Table 1: The Use of Gadgets in Preschool Children at Tk Al-Fitroh and Tk Budi Mulya Surabaya**

Use of Gadget	Frequency (f)	Percentage (%)
Good	27	26.0 %
Moderate	44	42.3 %
Bad	33	31.7 %
Total	104	100.0 %

Based on the table above shows that of 104 respondents preschool-age children in Al-Fitroh Surabaya Kindergarten and Budi Mulya Surabaya Kindergarten found the good use of gadgets in the category by 27 people (26.0%), the moderate category by 44 people (42.3%) and the bad category as many as 33 people (31.7%). These results indicate that the majority who experienced the use of gadgets among children were in the moderate category (42.3%).

Based on this research obtained from a questionnaire about the intensity of the use of gadgets including statement number 1 "your child uses gadgets for more than 1 hour" gadget usage in the category, while the respondent's parents answered in the column "Never" 1 person (2.3%), answered on column "Rarely" 25 people (56.8%), and answer choices in the column "Frequently" 18 people (40.9%). The frequency of using gadgets in the medium category on average, respondents answered the use of gadgets in a week "1-3 days / week and every day" by 20 people (45.5%) and respondents answered "4-6 days / week by 4 people (9.1%). According to Council on Communications and Media and Starsburger, (2011) a child can only be in front of the screen <1 hour every day. This opinion is supported by Sigman, (2012) who stated that the ideal time for preschool age children to use gadgets is 30 minutes to 1 hour a day. Researchers assume that if children use gadgets excessively then it will be more difficult to stop them from using gadgets and it is feared that children will become addicted to the gadgets.

The child's attitude to aggression such as physical (non-verbal) and verbal (verbal) counterattack behavior is one form of children's reactions to feelings of disappointment because the desire of using gadgets is not fulfilled and this can result in disputes or fights if they are disturbed while playing with gadgets or if the gadget is seized (Gunawan, 2017). So it will adversely affect the development of growing children, both physically and psychologically. When children use gadgets excessively, they will not recognize the value of time and children will become emotional if they do not get the gadget according to their need.

**Table 2: Emotional Development in Preschool Children in Kindergarten Al-Fitroh and Kindergarten Budi Mulya Surabaya**

Emotional Development	Abnormal		Borderline		Normal		Total	
	F	%	F	%	F	%	F	%
Difficulty scale	17	16.3%	46	44.2%	41	39.4%	104	100.0%
Strenght scale	10	9.6%	51	49.0%	43	41.3%	104	100.0%

Based from the table above it is seen that the emotional development of the respondents of 104 preschool children mostly experienced the use of gadgets in the borderline category as many as 46 people (44.2%) on the difficulty scale and 51 people (49.0%) on the strenght scale.

Emotional disorders in children most often occur due to anxiety disorders, behavior, attention-deficit / hyperactivity and depression (Waddell & Shepherd, 2002). Emotional development in children using the SDQ questionnaire (Strength and Difficulties Questionnaire) can be divided into 2 scales namely the scale of difficulty and strenght scale. Difficulty scale, there are emotional symptom subscale, conduct problem subscale, hyperactivity inattention subscale, peer problem subscale. The power scale is a prosocial subscale (Isiqomah, 2017).

Based on this research, it can be seen from the emotional symptom subscale aspect with respondents answering the questionnaire on statement number 2 "many worried or often anxious" on emotional development (difficulty, scale) in the borderline category where the respondents answered in the column "Never" as many as 10 people (22.7%), respondents answered in the column "Rarely" as many as 26 people (59.1%) and respondents answered in the column "Always" as many as 8 people (18.2%). Research conducted by Solantau *et al.*, (2010) show that interventions using psychoeducation on emotional symptoms, and anxiety of children to

improve the prosocial aspects of children. Preventive child mental health interventions are effective for adults.

Based on this research obtained from the aspects of the peer problem subscale with respondents answering the questionnaire on statement number 16 "at least one good friend" on emotional development (difficulty) in the borderline category of respondents answering statements in the column "Never" as many as 11 people (25.0%), respondents answered in the column "Rarely" as many as 20 people (45.55%) and respondents answered in the column "Always" as many as 13 people (29.5%). In children with emotional disorders will result in decreased socialization at home, school, community and peers (Puspita Sari, L. & Ardani, 2014).

**Table 3: The Relationship between the Use of Gadgets with Emotional Development in Preschool Children in Al-Fitroh Kindergarten and Budi Mulya Kindergarten Surabaya**

Use of Gadget	Emotional Development (Difficulty scale)							
	Abnormal		Borderline		Normal		Total	
	F	%	F	%	%	F	%	
Good	4	14.8%	6	22.2%	17	63.0%	27	26.0%
Moderate	3	6.8%	22	50.0%	19	43.2%	44	42.3%
Bad	10	30.3%	18	54.5%	5	4.8%	33	31.7%
<b>Total</b>	17	16.3%	46	44.2%	41	39.4%	104	100%

Spearman's Rho Statistical Test Value 0.000 (p=0.05) R value = -0.363 (low correlation)

From the Spearman rho statistical test result table on the gadget usage variable with emotional development (difficulty scale) in preschool children, the value of p value=0.000 (p <0.005) shows that there is a significant relationship between the use of gadgets and emotional development (difficulty scale) among children preschool in TK Al-Fitroh and TK Budi Mulya Surabaya.

Use of Gadget	Emotional Development (Strenght scale)							
	Abnormal		Borderline		Normal		Total	
	F	%	F	%	%	F	%	
Good	3	11.1%	8	29.6%	16	59.0%	27	26.0%
Moderate	3	6.8%	22	50.0%	19	43.2%	44	42.3%
Bad	4	12.1%	21	63.6%	8	24.2%	33	31.7%
<b>Total</b>	10	9.6%	51	49.0%	43	41.3%	104	100%

Spearman's Rho Statistical Test Value 0.001 (p=0.05) R value = -0.238 (low correlation)

From the Spearman rho statistical test results table on the gadget usage variable with emotional development (strenght scale) in preschool children, the value of p value =0.001 (p <0.005) shows that there is a significant relationship between the use of gadgets with emotional development (strenght scale) in children

preschool in TK Al-Fitroh and TK Budi Mulya Surabaya.

Based on the results of research on the use of gadgets in both categories with abnormal emotional development (difficulty, scale) 4 people (14.8%) and (strength scale) 3 people (11.1%). The results of this study indicate that most children who experience abnormal emotional development are children who use gadgets for more than 1 hour, but seen from the aspect of frequency using gadgets 1-30 minutes a day. The use of gadgets for too long can affect the level of aggression in children because children cannot understand the differences in the perspectives of others (Suyanto, 2005). In addition, children become insensitive to the environment around them. Children who use gadgets excessively find it difficult to interact with the surrounding environment. At this stage children are selfish and are not able to socialize well with others (Suyanto, 2005). Interaction with children is greatly influenced by the process of parenting or parental guidance towards children in introducing various aspects of social life to others (Nurmalitasari, 2015).

Based on the results of the research categories on the use of gadgets with normal emotional development (difficulty, scale) amounted to 17 people (63.0%) and (strength scale) amounted to 16 people (59.3%). Research conducted by Mayar, (2013) suggests that children's emotional development is highly dependent on the individual child, the role of parents, and the environment around the child. Each parent has their own way of educating and guiding children. Another factor for educating children is the education of the parents. The education of parents, especially the mothers will influence the way a person provides guidance and teaching to children (Riyanto, 2002). In this study, the education of mothers with children who use good gadgets with abnormal emotional development showed that 40.0% of parents were with a high school education and 60.0% of parents with a university education. This is in line with research conducted by Kharmina, (2011) saying that there is a significant influence between the level of parental education on parenting. According to Park & Park (2014), parents with low education have lower knowledge of the problem of using gadgets so when children are fussy, parents easily give their gadgets. Research conducted by Imron, (2017) shows that 46.9% of parents of students in PAUD Tunas Ceria have a high level of education. As a result, the higher the education of parents, especially mothers, the higher the knowledge of child development, especially social and emotional development of children. Researchers assume that the

higher the education of parents, especially among mothers having knowledge about the impact of the use of gadgets on emotional development of children show better parenting patterns given to children. The preschool age (3-6 years) is an important phase of growth and is the determinant of the children's growth and development in the later stages.

Based on the results of research on the category of moderate gadget usage with borderline emotional development of 22 people (50.0%) and normal as many as 19 people (43.2%). Sex factors can influence the development of emotions (Zahara & Fadhlia, 2013). The results showed that male sex more than women. The data show 46 people (56.8%) are male and 35 people (43.2%) are female. According to Indanah & Yulisetyaningrum, (2019), men do not experience problems in emotional development compared to women facing more emotional development problems. Researchers assume that gadgets influenced emotional development in both the gender differently. Girls tend to have difficulty controlling their emotions while men tend to care for others or the environment. This is in line with research (Mubashiroh, 2013) that showed the use of gadgets in children without the supervision of parents will have a negative impact on the child's social and emotional development.

According to Ardita, Kadir & Askar , (2012), the factors that influence children's growth and development are mother's education, parents' work culture, children being cared for, developmental stimulation and environmental factors of the child. In this study, the work of mothers and children is usually the work of mothers as housewives 50 people (61.7%) and the majority of children are looked after by mothers as many as 56 people (69.1%). Researchers assume that parents have a role to limit the use of gadgets and must give company to the children and control the applications contained in the gadget to prevent negative information from the application. However, in the moderate category of gadget usage with abnormal emotional development a small number of 3 people (6.8%) due to several cases of parental freedom obtained in the work of the household. Here the parents distract children by giving them the gadget. Nowadays, many parents don't care about their children using gadgets, because when children use gadgets, children can be calm and not fussy.

Based on the results of the study categories regarding the bad usgadgets with emotional development (difficulty, scale) borderline as many as 21 people (63.6%) and normal 8 people (24.2%). Emotional development (strength scale) borderline numbered 18

people (54.5%) and normal people (4.8%). Researchers assume that the role of parents is crucial in supervising and accompanying children when using gadgets, but parents must be able to become teachers by using gadgets as a medium to stimulate the children. Other research conducted (Imron, 2017), says that those who do not work (housewives) have free time to optimize and maximize child developmental process. Researchers assume that mothers who do not work can regulate patterns of child habits that will affect their physical and emotional development. The category of bad gadget usage with abnormal emotional development (difficulty, scale) of 10 people (30.3%) and (strength scale) of 4 people (12.1%). This is result is obtained from children who often use gadgets for more than 1 hour a day. Excessive or overuse of gadgets can affect a child's personality so that he is easily upset when his desires are not fulfilled, angry, and influences children's social interactions by not caring about those around him and

becoming introvert and self-centered.

## CONCLUSION

Based on the research findings and test results, the following conclusions can be drawn:

1. Preschool children at Al-Fitroh Surabaya Kindergarten and Budi Mulya Kindergarten Surabaya mostly experienced the use of gadgets in the medium category.
2. Preschool children at Al-Fitroh Surabaya Kindergarten and Budi Mulya Kindergarten Surabaya mostly experienced emotional development problems (both in difficulty scale and strength scale) in the borderline category.
3. The use of gadgets has a significant relationship on emotional development in preschool-aged children in Al-Fitroh Surabaya Kindergarten and Budi Mulya Surabaya Kindergarten.

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