

# Use of Gadget Duration and Development of Preschool Children in Bengkulu City 2018

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**3**  
**Abstract**— World Health Organization (WHO) reports that 5-25% of preschool-aged children suffer from developmental disorders, one of the factors that influence is the use of gadgets. If a child experiences a social development disorder, it is feared that the child will experience difficulty in adjusting himself, especially with the demands of the group, the child's independence in thinking and behaving, and most importantly the disturbance in the formation of self-concept of a child. This study aims to determine the relationship of the duration of use gadget to the development of preschool children. The research design used in this study was an analytical survey approach cross-sectional where the independent variable duration of use gadget and the dependent variable of child development are collected at the same time. The population was 46 children aged 5-6 years. The results showed that most of the children (56.7%) experienced a dubious development while the test results Chi-Square showed a p-value of 0.008, which means there is a relationship between the duration of the use of gadgets for the development of preschoolers with an OR = 14.875 means that the duration of use gadget in children is 14.875 times affecting children's development. The results of this study are expected parents/guardians to be more selective in giving toys to children, especially permitting to play gadgets.

**Keywords**— Gadget, child development

## **3** I. INTRODUCTION

**3** World Health Organization (WHO) reports that (5-25%) of preschool-aged children suffer from developmental disorders. Recorded (8-9%) preschool children experience psychosocial problems, especially social-emotional problems such as anxiety, difficulty adapting, difficulty socializing, hard to separate from parents, unruly children, and aggressive behavior. Toddlers in Indonesia Approximately (16%) reported experiencing developmental disorders in the form of intelligence disorders due to brain development disorders, hearing loss and motoric disorders [1].

A child can experience developmental delays in only one developmental domain or can be more than one developmental sphere. General developmental delay global developmental delay is a significant developmental delay in

two or more areas of development. Approximately (5-10%) children are estimated to experience developmental delays. Data incidence of general developmental delay is not known with certainty, but it is estimated approximately (1-3%) of children under five years of experience delays in the development of a commo [2].

The primary process of child development is intertwined between biological processes, the process of socio-emotional and cognitive processes. These three things will influence each other and throughout human life. During the development process, it is not possible for the child to face various problems that will hinder the process of further development. These developments include the development of social behavior, language, cognitive, gross physical and motoric fine and motoric [1].

If a child experiences a disruption in his social development, it is feared that the child will experience difficulties in his adjustment, especially with the demands of the group, the child's independence in thinking and behavior, and most importantly is a disruption in the formation of self-concept of a child. The impact will increase if regarding the trigger factor it is not immediately addressed. Whereas according to the results of the study, one of the factors or stimuli that can affect children's development is the child's habits in playing the gadget [3].

The effect of using gadgets is influenced by several factors such as the frequency, duration, and supervision of parents. If parental supervision is lacking and there is no substantial effort in limiting the time to play gadgets on children, it can lead to a negative side. These negative impacts can cause a person to be shy, lacking in confidence, aloof and stubborn. This is consistent with the results of the study that there is an influence between the length of use of gadgets on child development at Al-Azhar Kindergarten in Banda Aceh [4].

Based on data from the Bengkulu City Education Office in 2018 the number of children in Bengkulu City was 10,692 children consisting of 244 PAUD. The number of children in

Bengkulu city PAUD was 1,498 children. Based on the background description, the authors are interested in researching "The duration of the use of gadgets on the development of preschool children in the city of Bengkulu in 2018. [5].

## II. METHODS

The research design used in this study was analytical survey approach cross-sectional. This study consisted of independent variables (independent variables), namely the duration of use of gadget in children. The dependent variable (dependent variable) is the development of preschoolers. The population is the entire research subject to be studied. The population in this study were parents or guardians of students who had children aged 5-6 years in class B1 and B3 totaling 46 children. The sampling technique in this study used a sampling technique with simple random sampling. The sample in this study amounted to 30 people.

## III. RESULT

TABLE I DISTRIBUTION OF DURATION FREQUENCY OF GADGET USING IN BENGKULU ON THE EARLY CHILDHOOD EDUCATION IN 2018

Variabel	Frequency (N=30)	Percent (%)
On of Use Gadget		
Normal	9	30,0
Up Normal	21	70,0

Based on table I it is known that the duration of usage gadget normal is 30.0% and abnormal 70.0%.

TABLE II DISTRIBUTION OF CHILD DEVELOPMENT FREQUENCY IN BENGKULU CITY EARLY CHILDHOOD EDUCATION YEAR 2018

Variabel	Frequency (N=30)	Percent (%)
Development of Children		
Appropriate	11	36,7
Not Appropriate	19	63,3

Based on table II it is known that the appropriate development of children is 36.7% and doubts 63.3%.

TABLE III RELATIONSHIP BETWEEN DURATION GADGETS FOR CHILD DEVELOPMENT IN KOTA BENGKULU 2018

Durati on of Gadget Usage	Child Development				Total	%	P	OR
	In Accordance	%	Doubt	%				
Normal	7	23,3	2	6,7	9	30,0	0,002	14,873
Up Normal	4	13,3	17	56,7	21	70,0		
Totala	11	36,7	19	63,3	30	100		

Based on Table 3, it is known that most children 56.7% experiences dubious child development. Test results of Chi-Square showed  $p = 0.002$  ( $\text{sig} \leq 0.05$ ), this means that there is a relationship between the duration of usage gadget on the development of preschoolers in Bengkulu City in 2018. The OR = 14.875 means that the duration of use gadget in children is 14.875 times affecting child development.

## IV. DISCUSSION

The results of this study indicate that most children (70%) in Bengkulu City in 2018 have a habit of playing gadgets with a span of more than 1 hour per day. Those can be seen from the percentage of research results that show that their children have the habit of playing gadgets for more than 1 hour every day. The findings are contrary to the opinion of Starburger which states that children can only be in front of the screen <1 hour every day [5].

The use of gadgets in children causes children to become lazy to move and engage in activities. They prefer to sit in front of the gadget and enjoy the games that exist in certain features compared to interacting with the real world. It is certainly bad for children's development and health, especially concerning the brain and psychology. It is Not infrequently if the child has difficulty concentrating because the child's brain has been forced into an unreal world[6].

If an environment or peer is playing a gadget, it can affect other friends to play along. The most age of children found in the demographic data of the questionnaire of respondents in TK PGRI 33 Sumurboto, Banyumanik is five years. The age of 5 years is the age at which child development is evident because children have begun to know and connect with their peers [6].

Most children (63%) in Bengkulu City in 2018 have dubious child development. The results of this study are in accordance with research on the effect of the duration of gadget usage on child development at Al Azhar Kindergarten Banda Aceh. In the study explained that the habit of playing gadgets on children could affect their development. The results of this study can be concluded that the more often a child plays gadgets, the higher the risk of developing developmental disorders [5].

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From the results of this study, it can also be seen that a small proportion (13.3%) of children who often play gadgets have appropriate child development. It is because child development is influenced by many factors, not only from the stimulation of playing the gadget alone. Child development depends on the individual child, the role of parents, and the environment around the child [7]. In addition, based on research in Shanghai China stated that there is a relationship between the internet access on child growth[8]

From the results, also almost half (30%) children experienced normal development with a small portion (6.7%) duration of playing gadgets have evolved doubtful children and a small portion (23.3%) with the duration of playing standard gadgets experience appropriate child development. It is influenced by several factors such as internal factors, external, postnatal environment, psychosocial and aspects of child development [9].

Analysis of this research data using test Chi-Square with error rate (alpha) 5% or 0.05. After calculation, Chi-Square value ( $p = 0.002$ ) means that  $p \text{ value} < 0.05$ , it can be concluded that there is an effect of the duration of gadget usage on the development of preschool children in Bengkulu City in 2018. The results of this study are in line with the research stating that children who watch TV > 4 hours/day have four times higher risk of experiencing language delay[10].

General developmental delay global developmental delay is a significant developmental delay in two or more areas of development. Approximately (5-10%) children are estimated to experience developmental delays. Data incidence of general developmental delay is not known with certainty, but it is estimated approximately (1-3%) of children under five years of experience delays in the development of a commo [2].

From the results of this study, it can be seen that a small proportion (13.3%) of children who often play gadgets have appropriate child development. This is because child development is influenced by many factors, not just from stimulating playing the gadget. Child development is very dependent on individual children, the role of parents, and the environment around the child. [7]. In addition, based on research in Shanghai, China states that there is a connection between internet access to child development [8]

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the results of this study are in accordance with research on the influence of the duration of gadget usage on child development at al azhar kindergarten banda aceh. in this study explained the gadget with a duration of > 1 hour in a day, most children experience nuisance problems that the gadget playing habits in children can affect their development. the results of the study can be concluded that more often a child plays a gadget then the higher the risk of developing developmental disorders [5].

The results of this study are also in line with research which stated that the use of gadgets in children is due to wrong parenting which affects children's development [11]. On The Other Hand, This Study Found That Besides The Negatives, The Use Of The Gadget Is Effective As A Medium Of Learning In Developing Some Of The Children's Character [12].

The effect of using gadgets is influenced by several factors such as the frequency, duration, and supervision of parents. If parental supervision is lacking and there is no substantial effort in limiting the time to play gadgets on children, it can lead to a negative side. These negative impacts can cause a person to be shy, lacking in confidence, aloof and stubborn. This is consistent with the results of the study that there is an influence between the length of use of gadgets on child development at Al-Azhar Kindergarten in Banda Aceh [4].

## V. CONCLUSION

Based on the research that has been done on "The relationship of Gadget Usage Duration to the Development of Preschool Children in Bengkulu City 2018", it can be concluded that there is a relationship between the duration of the use of the gadget towards the development of preschool children with a P value of 0.002. It is expected that parents / guardians are more selective in giving toys to children, especially giving permission to play gadget. The parents' assertiveness and assistance are needed in limiting the duration and use of gadgets by children, so that later it will not have a negative impact that can interfere with the child's development process.

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