

The Correlation of the Length of Smartphone Use with the Development Level of Preschool-Age Children at Pertiwi Kindergarten Majatengah

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ABSTRACT

Every parent wants to have children who are healthy, intelligent, attractive, and have noble character. The prevalence of social development delays was 237 (85.9%) and fine motor skills in 80.1% of children in the United States. This needs to be supported by stimulation from parents. However, currently, parents tend to give smartphones rather than provide stimulation, so there is a risk of developmental disorders in children. This research aims to determine the relationship between the length of smartphone use and the level of development of preschool-age children at Pertiwi Kindergarten, Majatengah. The research design uses a correlation description design with a cross-sectional approach. The sample in this study was 29 Pertiwi Kindergarten students in Majatengah using a total sampling technique. Data collection using questionnaire sheets. This research uses Spearman rank correlation analysis. The research results showed that most of the respondents used smartphones for preschool-age children in the low category, with 17 respondents (58.6%). Most of the respondents had a level of development in pre-school age children in the appropriate category, 26 respondents (89.7%). The Spearman rank correlation test found that There is a relationship between the length of smartphone use and the level of development of preschool-age children with a p-value of 0.030 (< 0.05). The conclusion is that there is a relationship between the length of smartphone use and the level of development of preschool children at Pertiwi Kindergarten, Majatengah.

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INTRODUCTION

Every parent wants to have children who are healthy, intelligent, attractive, and have noble character. The principle of paying attention to seeds, weights, and beets has developed in society from ancient times in choosing a potential life partner, one of the aims is to obtain offspring that match these criteria. As time goes by, this principle tends to be ignored, even though this principle does not always conflict with the theory of child growth and development (Mansyur, 2019).

According to Susilowati (2022), every child needs to receive routine stimulation as early as possible and continuously at every opportunity. Lack of stimulation can cause deviations in a child's growth and development, even permanent disorders. Comprehensive and quality development of children is needed to achieve optimal growth and development. Sari (2020) explains that preschool children experience development

in various aspects. The preschool period is the right time to develop various potentials and abilities, including fine and gross motor skills, and social, emotional, and cognitive abilities.

Research by Toit et al., (2020) shows that of 237 (85.9%) children in the United States who are at risk of experiencing delays in social and fine motor development, there are 80.1% of children. Children experience developmental delays in aspects of social development and fine motor skills, due to a lack of parental role. The incidence of social development disorders in Indonesia based on Riskesdas data (2018), in pre-school children reached 69.9%. Factors that cause delays in social disruption are lack of stimulation from parents and the family environment.

Sari's (2020) research at PAUD/TK Tunas Rimba 1 Semarang showed that the results of screening using Denver II showed that the development of pre-school age children was mostly normal, 57.1% of the children and 42.9% of them suspected, of which 32 were found in the language aspect. 1% are suspected of having developmental delays. The development of preschool children is at most 35.7% suspect in the male gender, 25% suspect in the child's age 4 years, 9 respondents 32.1% suspect in the parent age category 25-35 years, and 25% suspect in the category working parents.

According to Mayar (2013), the achievement of early childhood development is very dependent on the individual child, the role of parents, the community environment, and kindergarten. In reality, in the field, children's environmental conditions do not support the process of gross, fine, and social motor development. Children experience developmental delays in carrying out social activities because their family environment introduces the use of smartphones at an early age. Heni's (2018) research shows that smartphone use influences the personal and social development of preschool children. The results of research by Putra and Patraningrum (2018) show that negative impacts can occur if children access YouTube too often in early childhood, such as the emergence of individual attitudes.

The Ministry of Education and Culture (2021) explains that when children use a smartphone or television it will cause a stimulus in their brain. At that time, there is a perception in the brain that will be stored through information, if the information is good the child receives it will have a positive impact. However, if a child consumes negative information, there will be changes in the child's brain that lead to negative things too.

Sawitri (2019) explained that in the field some parents use smartphones as a shortcut for accompanying their children. They use it to accompany their children so that parents can carry out their activities in peace, without worrying about their children wandering off, playing dirty, and messing up the house, which ultimately makes them fussy and disturbs their parents. Parents must be more careful in supervising and monitoring their children's daily activities in using smartphones to minimize the negative consequences of smartphone use, and smartphones should be used and utilized for positive things.

Setianingsih (2018) explained that gadget addiction can affect children's brain development because excessive production of the hormone dopamine disrupts the mature function of the Pre prefrontal cortex (PFC). The frontal Cortex (PFC) is the part of the brain that controls emotions, self-control, responsibility, decision-making, and other moral values. According to Febria (2021), using gadgets for too long will disrupt the development of the brain, causing delays in speaking (failure to communicate) and hampering the ability to express one's thoughts.

The results of Damaiyanti's research (2020) showed that 49 people (55.1%) of respondents used gadgets for > 1 hour, and of the total 89 respondents studied, more than half, namely 47 people (52.8%) of respondents with children's emotional development problematic. Children with duration of gadget use in the category >1 hour have a 4,708 times chance of experiencing Emotional Development Problems in the category, compared to children with duration of gadget use. Most of the children, namely 62 people (69.6%), use Smartphone Gadgets with features that are often opened by children, namely YouTube, 34 people (38.2%), Game features, 24 people (27%) and educational features, 16 people (18%).

The results of the pre-survey at the Pertiwi Majatengah Kindergarten showed that the number of students was 29 children. Researchers collected data on 10 children, showing that 8 children had the habit of using smartphones and 2 children did not use smartphones. Apart from that, researchers also measured the development of 10 children using KPSP aged 60 months and found that there were 3 children who "could not button their clothes/doll clothes" (2 children used smartphones and 1 child did not use smartphones), 2 children could not "jump on one leg several times without holding on" (2 children used smartphones for > 1 hour a day) and there were 3 children who could not follow the instructions given by the researcher in question points number 4 and 5 (2 children used smartphones for > 1 hour). hours a day while 1 child uses a smartphone < 1 hour a day).

Based on the background description above, the author wants to conduct research with the title "The correlation between the length of smartphone use and the level of development of preschool aged children at Pertiwi Kindergarten, Majatengah.

METHOD

The research design uses a correlation description design with a cross-sectional approach. The sample in this study was 29 Pertiwi Kindergarten students in Majatengah using a total sampling technique. Data collection using questionnaire sheets. This research uses Spearman rank correlation analysis.

RESULTS

Characteristics of respondents based on age at Pertiwi Kindergarten, Majatengah

Table 1 Characteristics respondents based on age at Pertiwi Kindergarten, Majatengah

Characteristics	N	Min	Max	Mean	Elementary school
Age	29	60.00	72.00	64.7586	4.17180

Table 1 shows that the average age of preschool age at Pertiwi Majatengah Kindergarten is 64.76 months with a minimum age of 60 months and a maximum age of 72 months. Based on the research results, it show that most of the duration of smartphone use among pre-school children is in the low category, namely 17 respondents (58.6%). The low duration of smartphone use is described as children using smartphones for 5-30 minutes. Low duration illustrates that parents can still control smartphone use, when using it parents are next to/near the child.

However, researchers found that some respondents used smartphones for 31-74 minutes, where this duration was in the medium category. The medium duration is included in the category that is quite long in terms of use. This condition is caused by parents not being able to care for/accompany their children directly, where parents are left doing housework. The results of Siswanti's research (2019) show that parents' motives for giving gadgets to their sons based on 1) Because of Parents' Motives Give Gadget On His son is a) 34% obey their children, b) 13.6% follow the development era, as well as 2) In order motive of parents give gadgets to child is a) 2.27% for social status, b) 16% for their child more often at home, c) 2.27% started from prize, d) 52.27% as tool play, e) 18.18% for introduce gadgets to child.

Using smartphones for a long duration is included in the category that is not good for the child himself, where the child will have less activity and interaction with his environment. Duration figure Smartphone use among children is also quite worrying, as many as 60% of children use it for more than 3 hours, 25% use it for 1-2 hours and only 15% of children spend less than 1 hour opening their smartphone (Ratnaningrum et al., 2022). Therefore, parents need an important role in the process of supervising children in using smartphones. Rahayu (2021) in his research explains that parents have a big role in controlling supervising And accompanying the use of gadgets by children so they can spared from possible effects caused by the use of gadgets..

Preschool-age children's smartphone usage time at Pertiwi Kindergarten Majatengah

Table 2 Length of Smartphone Use by Pre-School Age Children at Pertiwi Kindergarten Majatengah (n=29) smartphone use

Smartphone use	Frequency	%
Low	17	58.6
Currently	12	41.4
Total	29	100.0

Table 2 shows that most of the duration of smartphone use among preschool children at Pertiwi Majatengah Kindergarten is in the low category, namely 17 respondents (58.6%). Based on the research results, it show that most of the duration of smartphone use among preschool children is in the low category, namely 17 respondents (58.6%). The low duration of smartphone use is described as children using smartphones for 5-30 minutes. Low duration illustrates that parents can still control smartphone use, when using it parents are next to/near the child.

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The development level of pre-school age children at Pertiwi Kindergarten Majatengah

Tabel 3 Development level of pre-school age children at Pertiwi Kindergarten Majatengah (n=29)

Development Level	Frequency	%
In accordance	26	89,7
Doubtful	3	10,3
Total	29	100.0

Table 3 shows that most of the development levels of preschool children at Pertiwi Majatengah Kindergarten are in the appropriate category, namely 26 respondents (89.7%).

Based on the results study shows part big level of development in children aged in the preschool category by as many as 26 respondents (89.7 %). Appropriate development of children because they are in the observation process and capable of carrying out all indicators tested by the researcher. Besides that's the development of a suitable child _ because party parents are active in giving stimulation early on to the child. Results study by Suwanti And Yuniarti (2016) shows that There is a correlation between early stimulation early with development independence in children pre-school on child age early. The mother role is active in stimulating the development child, the stimulation carried out will influence the development child by his age.

Besides that, at stage age in school children start to develop a sense of desire he said, And Still Study How to become friends, interact with the environment around them, and control their body, emotions, and thoughts they as well as capable of communicating with more Good. Stimulus carried out on children aged 5-6 years at Pertiwi Kindergarten, Majatengah is :

Motor rough: done with practice child goes down stairs, jumping, standing with one leg

Motor smooth: child coloring without going out borders, making origami, composing beam

Talk And language: yes read books, yes explain hobbies, or things you like, you can spell Name

Socialization And independence: children can button up their clothes without help.

Hildayani (2012) in Syifauzakia et al . (2021) explain influencing factors in the development of a child factor heredity, environment, maturity, factors of context development, influence normative and nonnormative as well as influence time: sensitive period or critical. Possible efforts are made to prevent disturbance development in children that is factor environment like pattern foster parents. A consequence of wrong treatment _ from parents that, without realizing influences development And the child's growth. Protection of children very requires To use of a realized development source to Power qualified human beings for a period front. Enhancement awareness, not even parents lose the importance of them can understand And taking appropriate action To create a system of protection And good parenting for the child (Ramadhani And Nurwati, 2016).

The correlation between the length of smartphone use and the level of development of preschool-aged children at Pertiwi Kindergarten Majatengah

Tabel 4 The correlation between the length of smartphone use and the level of development of preschool aged children at Pertiwi Kindergarten Majatengah

Smartphone use	Development level of pre-school age children				Total	P value	Coefficient correlation	
	In accordance		Doubtful					
	n	%	n	%				
Low	17	100	0	0	17	100	0.030	0.404
Currently	9	75.0	3	25.0	12	100		
Total	26	89.7	3	10.3	29	100		

Table 4 shows the results of the duration of smartphone use in the low category for 17 respondents with the child's development level in the appropriate category. The results of the length of smartphone use in the moderate category were 9 respondents with the level of child development in the doubtful category of 3 respondents. The Spearman rank test obtained a p-value of 0.030 (< 0.05), meaning that there was a relationship between the length of smartphone use and the level of development of preschool-age children at Pertiwi Kindergarten, Majatengah. Apart from that, the test obtained a correlation coefficient value of 0.404, meaning it has a medium-strength relationship. The correlation coefficient value is positive, which means the lower the duration of smartphone use the higher the level of development of preschool-age children becomes more appropriate.

Based on the research results, show that the results of the Spearman rank test obtained a p-value of 0.030 (< 0.05), meaning that there is a relationship between the length of smartphone use and the level of development of preschool-age children at Pertiwi Kindergarten, Majatengah. This relationship exists because low-income parents tend to have developmentally appropriate children. This is because parents are more likely to interact a lot and provide stimulation to children which can support children's development. The results of this research are in line with the results of Pangaribuan's (2015) research which shows that there is a significant/meaningful relationship between the duration of gadget use and the growth and development of pre-school age children.

Activities carried out at Pertiwi Majatengah Kindergarten:

1. In the morning, line up together then go to class
2. Pray together before studying
3. Starting learning, such as coloring, arranging blocks, drawing without going out of bounds, playing musical instruments
4. During break times, before eating, wash your hands and pray
5. Nobody plays with smartphones at school

Setianingsih's (2018) research results show that 81.1% of children use gadgets < 2 hours per day and 82.2% of children are normal and do not have the risk of attention hyperactivity disorder. Narullita's research (2022) shows that there is a significant relationship between gadget use and personal social development in preschool children (3-6 years).

Apart from that, the test obtained a correlation coefficient value of 0.404, meaning it has a medium-strength relationship. The length of smartphone use is the lowest is supported by the level of development of pre-school age children according to 17 respondents. These results explain that smartphone usage is getting lower the more appropriate it is for the developmental level of preschool-age children.

CONCLUSION

Most of the respondents used smartphones for pre-school age children in the low category, namely 17 respondents (58.6%). Most of the respondents had a level of development in pre-school age children in the appropriate category, 26 respondents (89.7%). There is a relationship between the length of smartphone use and the level of development of preschool-age children at Pertiwi Kindergarten, Majatengah with a p-value of 0.030 (< 0.05).

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