



## DURATION OF GADGET USE AND FINE MOTOR DEVELOPMENT IN FOUR YEARS CHILDREN AT PUTRA BANGSA PRE-SCHOOL

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ABSTRACT	Keywords
<p>Gadget is a modern device which used as a means of communication and many more functions either for children or adults, and can make addicted. It also has influences to development of children's soft motoric nerves. The objective of this research is to know the relation between gadget usage duration and soft motoric nerves development of 4 years old children in PAUD Putra Bangsa Wajak Lor, Tulungagung Regency. The design of this research was correlational analytics with cross-sectional approach. The population was all of PAUD Putra Bangsa Wajak Lor and 24 respondents were taken as samples by purposive sampling technique. The independent variable was the duration of gadget usage, and obtained from questionnaires, and the dependent variable was the development of 4 years old children's soft motoric nerves which obtained from observation. The data analyzed with Spearman Rank Test. The research result were almost all of the respondents or (62.5%) used gadgets the most frequently (66.7%) of the respondents developments of soft motoric nerves were suspected. There was a negative and strong relation between gadget usage duration and the development of 4 years old children's soft motoric nerves (Spearman Rank, p value <math>0.000 &lt; 0.05</math>, Correlation Coefficient : -0.668). The conclusion was the higher the duration of the use of gadgets then the development of 4 years old children's soft motoric nerves in the suspect category, so that need role existence parents for the limit duration usage gadgets on child.</p>	<p><b><i>Gadget usage, the children's soft motoric nerves, 4 years old children.</i></b></p>

## INTRODUCTION

Gadgets are one of them the most modern technology and that can accepted in all circles society and create its use can dependency , fine mature nor children ( Velika , 2015). Most child child misuse gadgets to matter something missing \_ beneficial like playing games, watching YouTube , that's all child tend to be lazy to learn . This is what can be done influence fine motor development in

children, increasingly Good anal fine motor movements are increasing get creative like scissor coloring and painting (Santoso, 2012). At PAUD Putra Bangsa Wajak Lor Boyolangu use of gadgets in children Still high . Many parents report that child cry if the gadget taken . Prevalence child age preschool suffer disturbance growth morotic worldwide fine reaches 5-12 % . In Indonesia prevalence fine motor development amounting to 13-18%, which means that in Indonesia around

80% of children child using gadgets as means playing (Aisyah, 2015). Prevalence motor development in Java East that is 42.1% of children age pre school with exposure to gadgets Enough high From results studies Preliminary at PAUD Putra Bangsa Wajak Lor Boyolangu Tulungagung out of 10 parents , 9 parents reported it that his son At home hold *gadgets* For game nor watch videos on *YouTube* . Introduction child to gadgets usually started from method distract parents \_ with method shows the games and videos on the gadget later child become dependency with gadgets that will affects fine motor skills in children ( Nurmasari , 2016). Motor fine is movement that uses part muscles smooth , because No need functioning power \_ For do movement . By Because That parental role \_ to child must always done like invite child For study , draw as well as coloring . Don't to parents \_ rely on gadgets to accompany children and parents let more children \_ prioritize gadgets \_ No troublesome parents . \_ Playtime \_ child must useful use \_ like child play while study , during child Can copy Act adult behavior , developing \_ Power imagination and power creativity (Santoso, 2015).

Duration use of gadgets in children that is One or two hours per day and prevent exposure medical screen in children age under 5 years old . The use of gadgets at the age of 4 years is called excessive when its use more from 1 hour ( Loebis R, 2016). Observation to child 4 years old frequency use gadgets at least 1 to 3 days per week , meanwhile duration Minimum gadget usage is 5-15 minutes per day and a maximum of 5 hours per day . Average \_ child use gadgets 1 to 3 days per week and 20 to 30 minutes per day . If the use of the gadget is appropriate with specified duration \_ so motor development in children will experience progress . Progress fine motor development specifically extremities on progresses in a proximodial direction at the start from the shoulder towards direction distal until finger . Fine motor skills influenced by maturity motor function and coordination good neuromuscular , accurate visual function and progress \_ intellect non-verbal .

Objective study This For know connection

duration use gadgets with fine motor development in children 4 years old at PAUD Putra Bangsa Wajak Lor Regency Tulungagung.

## METHOD

Study This carried out at Putra Bangsa PAUD Wajak Lor Regency Tulungagung . Type study This is alytic correlational with approach *cross- sectional design* . Population on study This is all over child 4 years old at PAUD Putra Bangsa Wajak Lor Regency Tulungagung , numbering 25 children . Taking sample on study This done with technique *purposive sampling* . Amount sample on study This is 24 respondents Which fulfil criteria inclusion And exclusion . Instrument Which used For collection source data on study This is sheet created questionnaire \_ itself by the researcher with a total of 5 objective questions For know duration use of finished gadgets No need to test validity and reliability before used For data collection and research . Deep data analysis study This use approach *Spearman Rank test*.

## RESULTS

### 1. Characteristics Respondent Based on Type Gender in 4 Year Old Children at PAUD Putra Bangsa Wajak Lor Tulungagung

Table 1 Distribution frequency respondents based kind gender at Putra Bangsa PAUD Wajak Lor

No	Type Sex	Frequency	Percentage
1	Man man	11	45.8
2	Woman	13	54.2
<b>Amount</b>		<b>24</b>	<b>100.0</b>

Based on table 1 is known part big respondents manifold sex female 13 respondents (54.2%) out of a total of 24 respondents

### 2. Identification Respondent Based on Duration Usage Gadget in 4 Year Old Children at PAUD Putra Bangsa Wajak Lor Tulungagung

Table 2 Distribution frequency respondents based on duration use of gadgets in PAUD Putra Bnagsa Wajak Lor

No	Duration	Frequency	Percentage
1	Low	6	25.0
2	Currently	3	12.3
3	Tall	15	62.5
Amount		24	100

Based on table 2 is known part big duration use of gadgets in children 4 years old incl in category tall that is as many as 15 respondents (62.5%).

### 3. Identification Respondent Based on Development of 4 Year Old Children at PAUD Putra Bangsa Wajak Lor Tulungagung

Table 3 Distribution frequency Based on Fine Motor Development in 4 Year Old Children at PAUD Putra Bangsa Wajak Lor Tulungagung

No	Development Motor Fine	Frequency	Percentage
1	Normal	8	33.3
2	Suspect	16	66.7
3	No can tested	0	0
Amount		24	100

Based on table 3 is known part big respondents have fine motor development child 4 years old including suspect category , namely as many as 16 respondents (66.7%).

### 4. Connection Duration Usage Gadget With Fine Motor Development in 4 Year Old Children at PAUD Putra Bangsa Wajak Lor Tulungagung

Table 4 Tabulation cross Connection Duration Condensation Gadget with development Motor Gentle on children 4 years old

		Development Motor Fine							
		Normal		Suspect		No Can Tested		Amount	
		F	%	F	%	F	%	F	%
Duration use of gadgets	Low	6	100	0	0	0	0	6	25
	Currently	0	0	3	100	0	0	3	12.3
	Tall	2	33.3	13	80	0	0	15	62.5
Amount		8	33.3	16	66.7	0	0	24	100

	3	6	6	4	0
	3	7			0
Spearman Rank	-	0.066			
Correlation	8				
P-Value	0,000				

Based on table 4 above is known there is connection between duration use gadgets with fine motor development in children 4 years old at PAUD in Putra Bangsa Wajak Lor Regency Tulungagung (spearman p = value 0.000 < 0.05 then Ho is rejected . Correlation show that direction correlation negative with strength connection including in category strong . ( Coefficient : -0.0668) so if duration children's gadget use tall so fine motor development child 4 years old in suspect category .

## DISCUSSION

### 1. Identification Respondent Based on Duration Usage Gadget in 4 Year Old Children at PAUD Putra Bangsa Wajak Lor Tulungagung

Based on table 2 is known part big duration use of gadgets in children 4 years old incl in category tall that is as many as 15 respondents (62.5%). Gadgets are tool electronic size small who have function special and practical.Gadget formerly only used by groups intermediate to above , now there are lots of gadgets used by all circles , no exception children (Gayatri, 2011). Influencing factors \_ The use of gadgets is increasingly gadgets day the more sophisticated , in fact No aware of gadgets making dependency (Gayatri, 2011). Soplanit (2015) stated that must There is limit time The use of gadgets is increasingly gadgets day the more sophisticated , in fact No aware of gadgets making dependency . On research This limit time playing gadgets is guided by the Association Pediatricians of the United States and Canada mentioned new born child arrives with 2 years old so No introduced with gadgets, temporarily For children aged 3-5 years \_ can

introduced the gadget with duration 1 hour per day . Children aged 6-18 years only permitted For playing gadgets for around 2 hours per day . In table 2 above show that Most \_ respondents has know and use gadgets and use gadgets in categories high duration . \_ That thing contradictory with those recommended by the Association Pediatricians of the United States and Canada . Limitations to child in playing gadgets is a must implemented by parents , implementation the should in accordance with the rules put forward above . The use of gadgets has impact influence positive and negative towards use his especially in young children \_ in stages age under 5 years old pattern he thought Still in stage development . Parents \_ should follow participate in activity play and learn child , so child forget will the gadget and get used to it without gadgets. Basically \_ stimulation sensory motor like holding and touching surface smooth and rough , running , jumping , moving free , listen various type sound , as well socialize with other people can optimizing development brain children ( Imron , 2018).

## 2. Identification Respondent Based on Development of 4 Year Old Children in PAUD Putra Bangsa Wajak Lor Tulungagung

Based on table 3 is known part big respondents have fine motor development child 4 years old including suspect category , namely as many as 16 respondents (66.7%).

Development motor is development control body movements through coordinated activities between arrangement nerves center, nerves and muscles. Stage development This aimed at children can understand self Alone nor understand other people, the means child capable identify what 's there in his mind, what he feels and wants, as well capable put self from glass other people's eyes. Interview with some parents whose children own development social emotional less,

they say that Correct child No Want to free from the gadgets, even when There is friend who invited him playing, he refuse and choose use up the time For playing with gadgets. Agree with research by Pebriana (2017) suggests that compared to must play with his friend , son more interested For playing with gadgets, p That because lots of games available downloaded with easy and more pleasant so that child No interested in existing games around it .

## 3. Connection Duration Usage Gadget With Fine Motor Development in 4 Year Old Children at PAUD Putra Bangsa Wajak Lor Tulungagung

Based on table 4 above is known there is connection between duration use gadgets with fine motor development in children 4 years old at PAUD in Putra Bangsa Wajak Lor Regency Tulungagung . That thing prove that play gadgets with long duration has impact bad for children so that can lower Power concentration as well as increase dependency on gadgets. Research by Damayanti et al., (2020) says that playing with gadgets effective make child more emotional and aggressive moment disturbed when playing with gadgets, lazy about studying , and can influence connection socially , children also feel isolated by the environment around Because seldom interact , as well make child No care and lack responsive to environment surroundings . The output results of the Spearman Rank correlation test can be seen in table 4, which proves exists relationships and interrelationships between duration playing gadgets with development motor emotional child 4 years old . That thing proven from the SPSS *Spearman Rank Correlation* statistical test ( $P\text{-value } 0.000 < 0.05$  then  $H_0$  is rejected . Correlation show that direction correlation negative with strength connection including in category strong . ( Coefficient : - 0.0668) so if duration children's gadget

use tall so fine motor development child 4 years old in suspect category . Which means level strength or closeness between duration playing gadgets with development social emotional child correlated strong . Statement the based on guidelines strength relationship (Correlation Coefficient) which states level connection between variable correlated strong .

Impact bad other from use of gadgets , namely lack of socialize , child more choose play with the gadget compared to must play game traditional together his friend. Therefore that's a lot We meet children in difficulty in concentrate because brain child Already dominated by the digital world (Ameliola & Nugraha , 2013). Because that, old man role active For observe and control child in development very fast technology, without parental supervision \_ will give rise to a number of impact negative like case lower interpersonal skills and children more relying on gadgets rather than abilities himself itself (Nafaida et al., 2020). Following is a suggestion for children spared from impact Gadget negatives, that is with give limitation time as recommended by the American Academy of Pediatrics (APP), accompanying child when use gadgets and control spectacle seen child , invite child For play useful game For grow the flowers, too avoid playing with gadgets in front children (Rahayu et al., 2021).

Recommendation use of gadgets according to the American Academy of Pediatrics (APP), namely For No introduce gadgets to older children under 18 months , and gadgets are allowed introduced moment child 18-24 months old However recommended For watching quality programs, next No recommended use more gadgets from 1 hour per day For child range 2-5 years old, temporary 6 year old child

to the top constant use of gadgets limited so that No bother other activities and habits (IY Sari, 2019). Based on interview to some parents/guardians they say that child No use gadgets for activity academic , but For playing games or watch video YouTube . Because that , old man must accompany child moment playing gadgets, directing For open appropriate features with his age. Use appropriate gadgets portion like case For watch learning videos can increase knowledge child and improve various aspect development , like increasing cognition, language, and increasing development social emotional children (Ayu et al., 2020).

## CONCLUSION

Research results This show exists connection anatraa duration use gadgets with Fine motor development in 4 year old children at PAUD Putra Bangsa Wajak Lor Regency Tulunagung . That thing proven from the SPPSS *Spearman Rank Correlation* statistical test (P-value  $0.000 < 0.05$  then  $H_0$  is rejected . Correlation show that direction correlation negative with strength connection including in category strong . (Coefficient : -0.0668) so if duration children's gadget use tall so fine motor development child 4 years old in suspect category . which means level strength or closeness between duration playing gadgets with development social emotional child correlated strong. Statement the based on guidelines strength relationship (Correlation Coefficient) which states level connection between variable correlated strong .

## SUGGESTION

For Respondents, Parents should limit duration use of gadgets in children her breasts are increasing tall duration children's gadget use It's also getting lazier to do it learn .

For Profession Nursing, Health workers especially nurse have role important For give counseling to parents \_ about development child in a way sustainable For Researcher Next, Expected can used



as material or comparison for researcher the following is related with problem fine motor development in children 4 years old. Researcher furthermore can research more deep about lateness fine motor development with use other variables that are expected influence motor development smooth

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