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The Relationship between Gadget Use and Gross Motor Development of Children Aged 3-6 Years at Miftahul Ulum Sidomukti Kindergarten

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ABSTRAK
Gadget merupakan suatu alat elektronik kecil yang memiliki beragam fungsi khusus. Adanya gelombang radiasi pada *gadget* secara berlebihan akan mengakibatkan pancaran sinar biru yang mempengaruhi perkembangan otak dan syaraf. Penggunaan *gadget* yang berlebihan akan mempengaruhi aktivitas gerak anak sehingga berdampak pada perkembangan motorik kasar anak usia dini. Tujuan penelitian ini untuk mengetahui sigfinikasi hubungan antara penggunaan *gadget* dan perkembangan motorik kasar anak prasekolah di TK Miftahul Ulum Sidomukti. Metode jenis penelitian kuantitatif desain korelasional dengan pendekatan *Cross sectional*. Populasi penelitian ini adalah wali murid dan anak prasekolah di TK Miftahul Ulum Sidomukti berjumlah 35 orang dan di ambil sampel secara total sampling. Hasil penelitian ini menunjukkan 35 responden anak prasekolah yang diteliti di TK Miftahul Ulum Sidomukti merupakan penggunaan *gadget* dengan intensitas yang tinggi sebanyak 45,7%, sedangkan perkembangan motorik kasar anak dengan kategori mulai berkembang sebanyak 57,1 % dan hasil analisis nilai *p-value*= 0,001 < 0,05 yang berarti ada hubungan penggunaan *gadget* dengan perkembangan motorik kasar anak prasekolah usia 3-6 tahun dengan nilai *Contingency Coefficient* -0,550 artinya hubungan sangat kuat yang menunjukkan terdapat hubungan negatif yang bermakna semakin tinggi intensitas penggunaan *gadget* maka perkembangan motorik kasar anak semakin menurun. Kesimpulan: Peran orang tua memiliki pengaruh penting dalam pembentukan karakter dan tumbuh kembang anak pada perkembangan motoriknya. Saran: Diperlukan kesadaran dan tindakan untuk meningkatkan kewaspadaan terhadap anak-anak dalam mengaplikasikan *gadget*.

Keywords:
gadgets; preschool; development; gross motor

ABSTARCT
Gadgets are small electronic devices that have a variety of specialized functions. Excessive radiation waves in gadgets will result in blue light beams that affect brain and nerve development. Excessive use of gadgets will affect children's movement activities so that it has an impact on the gross motor development of early childhood. The purpose of this study was to determine the significance of the relationship between the use of gadgets and the gross motor development of preschool children at Miftahul Ulum Sidomukti Kindergarten. The method of quantitative research type correlational design with Cross sectional approach. The population of this study were student guardians and preschool children at Miftahul Ulum Sidomukti Kindergarten totaling 35 people and total sampling was taken. The results of this study showed 35 respondents of preschool children studied at Miftahul Ulum Sidomukti Kindergarten were the use of gadgets with high intensity as much as 45.7%, while the gross motor development of children with the category began to develop as much as 57.1% and the results of the analysis of the p-value = 0.001 <0.05 which means there is a relationship between the use of gadgets and the gross motor development of preschool children aged 3-6 years with a contingency coefficient value of -0.550,

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meaning that the relationship is very strong which indicates that there is a negative relationship which means that the higher the intensity of gadget use, the child's gross motor development decreases. Conclusion: The role of parents has an important influence on character building and children's growth and development in motor development. suggestion: requires awareness and action to increase awareness of children in applying gadgets

Introduction

Early childhood is called the golden generation because it is in a very rapid growth and development phase called the golden age phase. One of the factors that affects children's development is children's habits in playing gadgets. Early childhood is the beginning of a critical period in children's development, where they experience motor, postural, and language development growth (Aulia, 2023). Various ages have used gadgets and cannot be separated from human life, from children to adults who have used gadgets every day (Hidayat & Maesyaroh, 2022). Children aged 0-2 should not be exposed to gadgets, and children aged 3-6 years are limited to only 1 hour per day, while children aged 7-18 years old are limited to only 2 hours per day. However, in reality in field shows that many children use gadgets 4-5 times more than the recommended amount (Khairani et al., 2024). So that the use of gadgets too often will result in a lot of exposure to gadget radiation that affects the body and can even cause damage to nerve networks and brain (Oktaviyati et al., 2023).

According to the WHO, in 2020, there were around 3.9 billion preschool-age children using gadgets in the world. The data states that Indonesia occupies the 4th position as the largest user in the world. Indonesia itself is dubbed as the Asian digital technology giant, in total, there are 33.44% of early childhood children in Indonesia who use mobile phones or wireless devices. Meanwhile, early childhood who can access the internet reached 24.96%. If detailed, there are quite far differences in the characteristics of the age group. The percentage of people who use cellphones in children aged 0-4 years or toddlers is only 25.5%. While 5-6 years old 52.76%. The same pattern is also seen in children who access the internet. The age of toddlers is 18.79%, while children aged 5- 6 years of 39.97%. The Central Statistics Agency (2020), stated that the use of gadgets in the East Java area reached 76.56%. Meanwhile, in data obtained by the Central Statistics Agency of Jember Regency in 2022, preschool children (ages 3-6 years) who use mobile phones and computers are 71.15% and who access the internet are 56.51% (Gerojokan et al., 2024). Meanwhile, at Miftahul Ulum Sidomukti Kindergarten,

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the results of a preliminary study were obtained that 100% of children have known and used gadgets from an early age.

Parents allowing children to use gadget applications for too long will make the child become unconcentrated or lazy to learn, and reduce the quality of children in socializing because the use of gadgets is not balanced with the efficiency of their use. Meanwhile, motor development focuses on the physical development of children which includes body movements due to coordination with the nervous system, muscles, and brain. Physical development motor, it is expected that children will become active and creative individuals, so that it does not have the potential to harm their development which should be more dynamic and proactive (Fajar N. et al., 2024). The negative impact of gross motor development on children due to the use of gadgets is that children are lazy in activities and lack in movement because children can easily access various applications and information in the gadgets (Gerojokan et al., 2024). During the growth period, children who are given gadgets with good intensity and not excessive will be able to help stimulate the five senses, both vision and hearing. However, the negative impact will be more prominent if children use gadgets too often because the use of gadgets can cause their brain growth to develop rapidly which will eventually bring other impacts such as obesity, sleep disorders, mental illness, aggressiveness, digital senility, and so on (Oktaviyati et al., 2023). Parents or caregivers should have an important role in providing supervision of children's activities when using gadgets. Assistance from parents is very necessary in order to minimize children from the negative impact of gadget use.

Parents are also required to be able to be aware of their role in supervising early childhood who use gadgets so that children avoid addiction to excessive use of gadgets, and not under parental supervision. The use of gadgets is expected to have a positive impact on children which is realized by the ability to use gadgets in helping children's growth and development (W. Sari et al., 2024). One way to prevent is not to introduce gadgets to children and avoid using gadgets in front of children. If children are already familiar with gadgets, it is necessary to do several ways, namely limiting the time to play gadgets, diverting them by giving interesting educational toys to children, inviting children to play with their parents. And other parties who help

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prevent gadget dependence include families and schools. Based on the description above, the researcher will conduct Research related to "The Relationship between Gadget Use and Gross Motor Development of Children Aged 3-6 Years."

Method

The design of this study is correlational (relationship) with a cross sectional approach. This research was conducted in April 2025 at Miftahul Ulum Sidomukti Kindergarten. The population in this study is students and guardians of Miftahul Ulum Kindergarten who use gadgets as many as 35 respondents with a total sampling technique so that the sample is 35 respondents. The instruments of this study are a questionnaire on the use of gadgets made by (Putriana et al., 2019) Validity and realism 0.927 and an observation sheet of gross motor development made by (Alfaini, 2024) Validity and realism 0.956. This research obtained the ethical feasibility of KEPK UDS with number: 0828/FIKES-UDS/U/II/2025 during the research process the researcher made direct observations on students and gave questionnaires to the student's guardians based on a questionnaire on the use of gadgets and an observation sheet on gross motor development, after the data was collected, the researcher processed the data using the SPSS program version 25. Statistical analysis in this study is univariate and bivariate, univariate is used to identify the characteristics of respondents while bivariate analysis in this study is used to determine the correlation between the variables of gadget use and children's gross motor development using the Spearman Rank test. The basis for decision-making is that the results of the research hypothesis Ha are accepted with the results of the analysis of the p-value = 0.001 < 0.05 which means that there is a relationship between gadget use and gross motor development of preschoolers, then the test is continued with a contingency coefficient with a value of -0.550, meaning that the strength level of the relationship is very strong between the variables of gadget use and the gross motor development of children.

Results

The characteristics of respondents in the study on the relationship between gadget use and gross motor development of preschool children aged 3-6 years at Miftahul Ulum Sidomukti Kindergarten can

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be seen in the table below:

A. General Data

Characteristics of respondents in the study on the relationship between gadget use and gross motor development of children aged 3-6 years at Miftahul Ulum Sidomukti Kindergarten

Table 1. Characteristics of Respondents Based on Child Gender at Miftahul Ulum Sidomukti Kindergarten in 2025

Jenis kelamin	n	%
Laki-Laki	12	34,3
Perempuan	23	65,7
Total	35	100,0

Based on table 1. Above it can be seen that of the 35 respondents, most of them were female (65.7%)

Table 2. Characteristics of Respondents Based on the Age of Children at Miftahul Ulum Sidomukti Kindergarten in 2025

Usia	n	%
3 Tahun	2	5,7
4 Tahun	4	11,4
5 Tahun	10	28,6
6 Tahun	19	54,3
Total	**35**	**100,0**

Based on table 2. Above, the most respondents can be seen almost half of the age of 6 years with a percentage (54.3%).

Table 3. Characteristics of respondents based on age of initial use Gadgets at Miftahul Ulum Sidomukti Kindergarten in 2025

Usia Awal Menggunaan *Gadget*	n	%
2 Tahun	2	5,7
3 Tahun	16	45,7
4 Tahun	13	37,1
5 Tahun	4	11,4
Total	**35**	**100,0**

Based on table 3. Above it can be seen that the initial age of children using gadgets is almost half the age of 3 years (45.7%).

Table 4. Characteristics of Respondents Based on Limitations on the Use of Gadgets at Children's Age at Miftahul Ulum Sidomukti Kindergarten in 2025

Batasan Penggunaan *Gadget*	n	%
Ya	15	42,9
Tidak	20	57,1
Total	**35**	**100,0**

Based on table 4. Above it can be seen that most of the use of gadgets is not limited by parents as much as (57.1%).

Table 5. Characteristics of Respondents Based on Mother's Education at Miftahul Ulum Sidomukti Kindergarten in 2025

Pendidikan Ibu	n	%
SD	4	11,4
SMP	3	8,6
SMA	25	71,4
Perguruan Tinggi	3	8,6
Total	**35**	**100,0**

Based on table 6. Above it can be seen that Mother's Education is mostly 71.4% high school educated

Table 6. Characteristics of Respondents Based on Father's Work at Miftahul Ulum Sidomukti Kindergarten in 2025

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Pekerjaan Ayah	n	%
Swasta	14	40,0
Petani	17	48,6
Lainnya	4	11,4
Total	**35**	**100,0**

Based on table 7. Above can be seen that almost half of Father's work has a job as a farmer at 48.6%.

Table 7. Characteristics of Respondents Based on Mother's Work at Miftahul Ulum Sidomukti Kindergarten in 2025

Pekerjaan Ibu	n	%
Swasta	1	2,9
IRT	32	91,4
Lainnya	2	5,7
Total	**35**	**100,0**

Based on table 8. Above can be seen The work of the parents of the students, namely from the mother, almost half of them have a job as a housewife at 91.4%

B. Custom Data

Table 8. Characteristics of Respondents Based on Gadget Use Children at Miftahul Ulum Sidomukti Kindergarten in 2025

Penggunaan *Gadget*	n	%
Rendah	5	14,3
Sedang	14	40,0
Tinggi	16	45,7
Total	**35**	**100,0**

Based on table 11. Above can be seen that most 45.7% of children experience high use of gadgets.

Table 9. Characteristics of Respondents Based on Early Detection of Children's Gross Motor Development at Miftahul Ulum Sidomukti Kindergarten in 2025

Perkembangan Motorik Kasar	n	%
BB	1	2,9
MB	20	57,1
BSH	12	34,3
BSB	2	5,7
Total	**35**	**100,0**

Based on table 12. Above it can be seen that most of the 57.1 % detected gross motor development of children Beginning to Develop (MB).

Table 10. The Relationship between Gadget Use and Early Detection of Children's Gross Motor Development at Miftahul Ulum Sidomukti Kindergarten in 2025

Penggunaan Gadget	Deteksi Dini Perkembangan Motorik Kasar									
	BB		MB		BSH		BSB		Total	
	n	%	n	%	n	%	n	%	n	%
Rendah	0	0,0	0	0,0	3	60	2	40	5	100,0
Sedang	0	0,0	8	57,1	6	42,9	0	0,0	14	100,0
Tinggi	1	6,3	12	75,1	3	18,8	0	0,0	16	100,0
	1	2,9	20	57,1	12	34,3	2	5,7	35	100,0
Spearman's rho					<0,001					
Contingency Coefficient					0,550					

Based on table 13. explained above explaining that of the 35 respondents, it was known that preschoolers out of 5 respondents with low gadget use 60% of gross motor development was included in the category of Developing As Expected (BSH), of 14 respondents with moderate use of gadgets, 57.1% of gross motor development was included in the category of Starting to Develop (MB), of 16 respondents with the use of gadgets, 75.1% of children's gross motor development was included in

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the category of Starting to Develop (MB). The results of the spearman rank test showed a significant result of p value = 0.001 where the p-value (< α 0.05). From the results of the calculation of the p value of 0.001 is smaller than (α 0.05), H0 is rejected and H1 is accepted, so it can be concluded that there is a relationship between the use of gadgets and the gross motor development of preschoolers at Miftahul Ulum Sidomukti Kindergarten.

Discussion

a. Use of Gadgets in Preschool Children

The results of the research on the use of gadgets showed that 35 respondents of preschool children of Miftahul ulum Sidomukti Kindergarten out of 16 respondents with a high percentage (45.7%) of which was the use of gadgets. This is due to the lack of parental supervision of their children when using gadgets. When using gadgets excessively, it will result in blue light that affects brain and nerve development. The development of technology in this day and age has been increasingly rapid. The use of technology, especially gadgets, can affect children's behavior. Gadgets have positive and negative things for children. Excessive use of gadgets can negatively affect both behavior and development for children. Gadgets make it easier for children to have access to information media and technology. So that children become lazy to move and do activities. Circumstances like this will certainly affect children's development, be it in terms of physical, motor, psychological, language, and social aspects of children. In fact, they are no longer interested in playing with their peers because they are more interested in digital games. The results of Elka's research also reveal that the use of gadgets in children must always be supervised, given a time limit, limit internet connections and also choose applications that can hone children's development (Elka Fitri et al., 2022). The results of oktaviyati's research show that excessive use of gadgets can produce blue light rays that have the potential to affect brain development (Oktaviyati et al., 2023).

In line with the theory of the use of gadgets in children aged 3-6 years old, it is very common in the current era of technological development. In this study, the respondent's father had a job as a farmer which resulted in spending more time working, and the respondent's parents had an income that could support the life of children who followed technological

developments so that parents bought children in the form of gadgets. In this study, it was obtained that the use of gadgets > 1 hour every day because there are no restrictions and supervision from mothers who are with their children every day, even though almost half of the respondents' mothers, as housewives where it can provide supervision for their children, but the busyness of mothers who have the role of housewives distracts children by providing gadgets so that children are not fussy when mothers are busy with household chores so that it lack of supervision and limitations of mothers in accompanying children when children use gadgets in their homes.

b. Gross Motor Development in Preschoolers

The results showed that 35 respondents out of 20 respondents (57.1%) were detected to have gross motor development of children who began to develop (MB). Motor physics is very important in development that needs to be paid attention to. However, when children use gadgets too often, this leads to a decrease in physical activity. One of the most actively used parts of the body is the hands, so the power is mainly focused on the hands. In fact, other parts of the body should also get good stimulation so that children stay agile and active. Thus, excessive use of gadgets can reduce children's delays in physical activities and make them more passive. Children need to be encouraged to stay active, do physical movements, and feel stimulation from the surrounding environment to develop motor skills.

The progress of children's growth and development is needed, considering that children are the next generation of the nation who have the right to grow and develop optimally according to their age. Children who grow and develop according to their age will become healthy adults, this is influenced by genetic factors and environmental factors as the child grows and develops. Efforts to ensure that children grow and develop properly by providing early detection through stimulation of early intervention detection of children's growth and development. The use of gadgets can inhibit gross and fine motor development in children. Therefore, children lack the stimulation needed to achieve motor development that should be appropriate for their age. The use of gadgets is limited by parents, children will interact a lot with the surrounding environment compared to playing with their gadgets and it is also important for early childhood to receive

stimuli and exercises that support their gross motor development, so that children can become more skilled in carrying out body movements. Moving activities that are mostly done by children provide great benefits to their motor development. On the other hand, children who tend to spend time playing gadgets do not get enough stimulation for their physical motor development. Therefore, it is necessary to limit the time of use of gadgets in children and early detection of children's gross motor development so that later it can be handled effectively and appropriately. Pramanda's research said that education has a positive impact on children's growth and development (Pramanda, 2023). Widiana's research The use of gadgets without direction and limitations continuously will have an impact on children's development, as well as cause addiction in children. Children who are addicted to using gadgets will experience delays in their developmental process, especially in the process of gross motor development (Widiana et al., 2022).

In line with the theory of the results of Widiana's research, the lack of parental stimulation is one of the triggering factors for delays and failures in children's development. Stimulation of child development can develop optimally and is very necessary at this time so it takes parental awareness to stimulate children from an early age. One of the factors that can affect children's motor skills is the intensity of children in using gadgets. A mother's education also affects the way she raises her children. If the mother's education is high, it will increase awareness of the health status of the family and mothers tend to stimulate their children more often. And the child's motor development is low due to the lack of stimulation from both parents due to the role of the father who has a role in making a living, with the father's busy work will cause a lack of interaction between father and son. And mothers play the role of housewives so that the lack of contribution of both parents in nurturing and educating children to optimize the stimulation of children's gross motor development.

c. The Relationship between Gadget Use and Preschoolers' Gross Motor Development

The results showed that 35 respondents of preschool children out of 5 respondents with low gadget use (60%) gross motor development were included in the category of Developing As Expected (BSH), from 14

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respondents with moderate gadget use (57.1%) gross motor development was included in the category of Starting to Develop (MB), from 16 respondents with the use of gadgets (75.1%) children's gross motor development was included in the category of Starting to Develop (MB). The results of the spearman rank test show significant results of p value = 0.001 (< α 0.05) then it can be concluded that there is a relationship between the use of gadgets and the gross motor development of preschool children. Followed by the contingency coefficient test, a value of -0.550 was obtained, meaning that the relationship was very strong which showed that there was a negative relationship which meant that the higher the intensity of gadget use, the lower the child's gross motor development.

Widiana's research found that there is a relationship between high-intensity gadget use and children's gross motor development with negative values (Widiana et al., 2022). The most important children's education comes from the family environment, parents have a role and responsibility as the first and main educator for children, every child must be adequately educated, both at home, at school and in the community (Novitandari et al., 2023). In addition to inhibiting the process of motor development, excessive use of gadgets will cause children to become lazy to move and be active, because children prefer to play gadgets rather than playing with their peers (Gerojokan et al., 2024).

Researchers obtained data on the use of gadgets without directions and restrictions continuously, which will have an impact on children's development, as well as cause addiction for children. Children who are addicted to using gadgets will experience developmental delays, especially in Gross motor development. In addition to inhibiting the child's development process, excessive use of gadgets will cause children to become lazy to move and do activities so that children prefer to play gadgets rather than playing with their peers. This gross motor will develop well if the child's social skills are good with their peers. The high use of gadgets in early childhood is caused by several factors, one of which is environmental factors where the majority of children have been allowed by their parents to use gadgets, even some parents have facilitated gadgets to their children on the grounds that peers or children in the surrounding environment have used gadgets. Therefore, parents have an active role in providing limits and supervision to their

children, either direction by controlling application features on gadgets with learning features that can improve children's development, or with application features that provide education so that children can get a positive impact from the use of these gadgets. The researcher obtained data that almost half of the respondent mothers are housewives which will cause mothers to play a dual role such as taking care of household chores and playing a role in taking care of their children, thus causing mothers to give gadgets so that children are not fussy when mothers are busy with housework without restrictions and supervision in accompanying their children when using gadgets. Therefore, the intensity of gadget use in children aged 3-6 years needs to be limited in time with the low-intensity category of < 30 minutes/day with a maximum of 2x use, and moderate intensity of 40-60 minutes/day with 2-3x use, while high intensity duration > 75 minutes-120 minutes/day with more than 3x use. In addition, with the use of gadgets restricted, children will interact a lot with their environment compared to playing with gadgets so that children's gross motor development is not easily disturbed. Therefore, it is necessary to detect early gross motor development of preschoolers so that treatment can be carried out appropriately and optimally.

Conclusion

The researchers concluded that:

1. The use of children's gadgets is mostly detected.
2. Early detection of children's gross motor development is mostly detected in developing (MB) in children's gross motor development problems
3. There is a very strong relationship between the use of gadgets and the gross motor development of children.

Ethics Approval and Consent to Participate

This research obtained the ethical feasibility of KEPK UDS with number: 0828/FIKES-UDS/U/II/2025 during the research process the researcher made direct observations on students.

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References

Alfaini, S. (2024). PENGARUH CHANNEL YOUTUBE SUPER SIMPLE SONG TERHADAP PERKEMBANGAN MOTORIK KASAR ANAK USIA 3-4 TAHUN.

Aulia, A. (2023). Hubungan Penggunaan Gadget Terhadap Kualitas Tidur. Jurnal Promotif Preventiv.

Candra, O., Pranoto, N. W., Ropitasari, R., Cahyono, D., Sukmawati, E., & CS, A. (2023). Peran Pendidikan Jasmani dalam Pengembangan Motorik Kasar pada Anak Usia Dini. Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 7(2), 2538–2546. https://doi.org/10.31004/obsesi.v7i2.4506

Darah Ifalahma, & Nur Hikmah. (2020). Pengetahuan Ibu Tentang Perkembangan Motorik Kasar pada Balita usia 3-4 Tahun. Infokes: Jurnal Ilmiah Rekam Medis Dan Informatika Kesehatan, 10(2), 20–27. https://doi.org/10.47701/infokes.v10i2.1028

Elka Fitri, D., Dwi Sagita, M., & Wahyuni, F. (2022). Hubungan Intensitas Penggunaan Gadget Terhadap Perkembangan Anak Usia Pra Sekolah. Jurnal Pustaka Keperawatan (Pusat Akses Kajian Keperawatan), 1(2), 67–72. https://doi.org/10.55382/jurnalpustakakeperawatan.v1i2.337

Fajar N., Putri M., & Hamda M. (2024). Dampak Penggunaan Gadget Terhadap Perkembangan Motorik Anak : Literature Reviwe . Seminar Nasional LPPM UMMAT, 3, 694–703.

Gerojokan, A., Pajarakan, K., Probolinggo, K., & Timur, J. (2024). Hubungan Penggunaan Gadget dengan Pekembangan Motorik pada Anak Pra Sekolah Usia 4-6 Tahun di TK Anggrek 97 Kabupaten Jember Mahasiswa Program Studi Pofei Ners , Universitas Hafshawaty Pesantren Zainul. 2(4), 56–66.

Hadi, R., & Sumardi, L. (2023). Penggunaan Gadget oleh Anak Usia Dini. JIIP - Jurnal Ilmiah Ilmu Pendidikan, 6(2), 1062–1066. https://doi.org/10.54371/jiip.v6i2.1324

Hanum, A., & Rohita, R. (2021). Kegiatan Sentra Olah Tubuh Dalam Menstimulasi Kemampuan Motorik Kasar Anak. Jurnal Anak Usia Dini Holistik Integratif (AUDHI), 2(2), 89. https://doi.org/10.36722/jaudhi.v2i2.584

Hidayah, R. L. (2022). Pengembangan Permainan Sirkuit Bakbol (Bak Bola) Untuk Mengasah Kemampuan Motorik Kasar Anak Usia 4-5 Tahun. http://repository.unpkediri.ac.id/8203/

Hidayat, A., & Maesyaroh, S. S. (2022). Penggunaan Gadget pada Anak Usia Dini. JURNAL SYNTAX IMPERATIF : Jurnal Ilmu Sosial Dan Pendidikan, 1(5), 356. https://doi.org/10.36418/syntax-imperatif.v1i5.159

Humaedi, H., Saparia, A., Nirmala, B., & Abduh, I. (2021). Deteksi Dini Motorik Kasar pada Anak Usia 4-6 Tahun. Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 6(1), 558–564. https://doi.org/10.31004/obsesi.v6i1.1368

Khairani, F., Naria, E., Lubis, I. K., Koka, E. M., Harahap, A. F., Rangkuti, I. M., Marpaung, M. T. E., & Daulay, H. (2024). Hubungan Peran Orang Tua terhadap Intensitas Penggunaan Gadget pada Anak Usia Dini di Kabupaten Tapanuli Selatan. Tropical Public Health Journal, 4(1), 52–58. https://doi.org/10.32734/trophico.v4i1.15485

Munir, D., & Himpong, M. D. (2020). Dampak Gadget Dalam Memotivasi Peningkatan Prestasi Belajar Mahasiswa Prodi Ilmu Perpustakaan Fisip Unsrat. Acta Diurna, 1–11. https://ejournal.unsrat.ac.id/index.php/actadiurnakomunikasi/article/view/27151

Notoadmojo, S. (2018). Metodologi Penelitian Kesehatan. Rineka Cipta.

Novitandari, E., Nursalim, M., & Rahmasari, D. (2023). Paradigma Neuropsikologi "Kecanduan Gadget Berakibat Pada Perkembangan Motorik Anak": Narrative Literature Review. Pendas: Jurnal Ilmiah Pendidikan Dasar, 8(3), 5645–5656.

Oktaviyati, F., Faridawati, D., Siswanti, I. W., Havana, R. F., & Handayani, R. (2023). Analisis Dampak Radiasi Gadget terhadap Perkembangan Motorik dan Kognitif Anak. Jurnal Golden Age, Universitas Hamzanwadi, 7(1), 74–80.

Pesantren, S. H., & Hasan, Z. (2020). Minimalisir Penggunaan Gadget Pada Anak Pra Sekolah Yessy Nur Endah S Tutik Hidayati Iis Hanifah. 4, 114– 124. https://www.researchgate.net/publication/342665314_MINIMALISIR_PENGGUNAAN_GADGET_PADA_ANAK_PRA_SEKOLAH

Pramanda, A. I. (2023). Hubungan Pengetahuan Orang Tua Dengan Perkembangan Motorik Kasar Pada Anak Usia 4 - 5 Tahun di PAUD Permata Bunda Kecamatan Geneng Kabupaten Ngawi. Journal Buana of Nursing, 1(1), 26–31.

Pujiono, P., Purnamasari, I., & Muhtarom, M. (2022). Keefektifan Permainan Engklek Untuk Meningkatkan Fisik Motorik Anak Kelompok B Di Tk Mekar Sari Kandeman Batang. Majalah Lontar, 34(2), 67–74. https://doi.org/10.26877/ltr.v34i2.12966

Putriana, K., Pratiwi, E. A., & Wasliah, I. (2019). Hubungan Durasi dan Intensitas Penggunaan Gadget dengan Perkembangan Personal Sosial Anak Usia Prasekolah (3-5 Tahun) di TK Cendikia Desa Lingsar Tahun 2019. Jurnal Kesehatan Qamarul Huda, 7(2), 5–13. https://doi.org/10.37824/jkqh.v7i2.2019.112

Sahir, S. H. (2021). Metode Penelitian (T. Koryati (ed.)).

Sari, A. I., Zannah, A. N., & Yuningsih. (2024). Hubungan Perkembangan Balita Stunting dengan Status Perilaku dan Emosional di Wilayah Puskesmas Kaliwates Jember. ARTERI : Jurnal Ilmu Kesehatan, 5(2), 42–47.

Sari, W., Machmud, H., & Anhusadar, L. (2024). Pengawasan Orang Tua terhadap Penggunaan Gadget pada Anak Usia Dini. BOCAH: Borneo Early Childhood Education and Humanity Journal, 3(2), 73–83. https://doi.org/10.21093/bocah.v3i2.8251

Sriyanto, A., & Hartati, S. (2022). Perkembangan dan Ciri-Ciri Perkembangan pada Anak Usia Dini. Journal Fascho: Jurusan Pendidikan, 2(1), 28–32.

Sugiarti, Y., & Andyanto, H. (2022). Pembatasan Penggunaan Gadget Terhadap Anak Dibawah Umur Oleh Orang Tua. Jurnal Jendela Hukum, 9(1), 81–92. https://doi.org/10.24929/fh.v9i1.2051

Talango, S. R. (2020). Konsep Perkembangan Anak Usia Dini. Early Childhood Islamic Education Journal, 1(1), 92–105. https://doi.org/10.54045/ecie.v1i1.35

Tasya, A., Alini, & Erlinawati. (2023). Hubungan durasi dan intensitas penggunaan gadget dengan perkembangan sosial anak pra sekolah usia 4-6 tahun. Jurnal Keperawatan Jiwa FIKKes Universitas Muhammadiyah Semarang Bekerjasama Dengan PPNI Jawa Tengah, 11(1), 69–78.

Usmiar, U., & Utomo, R. (2020). Pengaruh Motivasi Dan Disiplin Kerja Terhadap Kinerja Karyawan Balai Monitor Spektrum Frekuensi Radio Kelas Ii Padang. Jurnal Menara Ekonomi : Penelitian Dan Kajian Ilmiah Bidang Ekonomi, 6(3), 106–114. https://doi.org/10.31869/me.v6i3.2243

Wahyuni, S., Saudah, & Aghnaita. (2022). Perkembangan Sosial Emosional Anak Usia Dini 4-5 Tahun Di Kota Palangka Raya. Jurnal I'tibar: Jurnal Pendidikan Islam Anak Usia Dini, 6(2), 14–28.

Widiana, W., Rudsiyani, I., & Kusumawardani, R. (2022). Penggunaan Gawai Terhadap Perkembangan Motorik Kasar Anak Usia 5-6 Tahun. Jurnal Pendidikan Anak Usia Dini Undiksha, 10(3), 440–448. https://doi.org/10.23887/paud.v10i3.51352

Wigaringtyas, A. A., & Katoningsih, S. (2023). Kemampuan Motorik Kasar melalui Kegiatan Tari Dongklak. Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 7(1), 312–322. https://doi.org/10.31004/obsesi.v7i1.3706

Wulandari, H., & Santoso, M. B. (2020). Proses Parental Mediation Terhadap Anak Usia Prasekolah Dalam Menggunakan Gadget.

Focus : Jurnal Pekerjaan Sosial, 2(2), 232. https://doi.org/10.24198/focus.v2i2.26252

Yanti, E., & Fridalni, N. (2020). Pengaruh Kirigami Terhadap Kemampun Motorik Halus Anak Kelompok B Di Tk Asyiyah Bustanul Athfal Iv Kota Jambi. Jurnal Kesehatan Medika Saintika, 11(2), 226–235.