Anthropometric Profile and Motor Ability of Early Childhood Children (3-5 Years) in Urban and Rural Areas in Malang

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Abstract. Early detection and attention are required for early childhood development (the "golden age") in the 0–6-year-old age group. One of the primary issues in children's growth and development is improved development. Developmental delays are a problem in Indonesia's health, affecting about 56.34% of preschoolers. Knowing the anthropometric characteristics and motor abilities of young children in Malang's rural and urban areas is our main goal. Research methodology: In comparative research with a quantitative approach, survey methodology is mentioned. In order to analyze 20 respondents, each between the ages of 3 and 5, from Hudan Cendikia Kindergarten in urban areas and Al Hidayah Kindergarten in rural areas. Anthropometric measurements, the Gross Motor Development Test (TGMD), and cutting-and-pasting exercises served as the testing tools. Results: It was discovered that both urban and rural populations had thin BMIs, average gross motor skills, and extremely good fine motor abilities. Urban and rural populations also had average gross motor skills. A p-value of 0.049 is obtained for the gross motor test, indicating that there is a difference between the two regions, while a p-value of 0.813 is obtained for the fine motor ability measurement test, indicating that there is no difference between urban and rural areas based on BMI. This indicates that exams taken at kindergartens in Malang's urban and rural areas had identical results.

Keywords: Anthropometry, Rough Motor, Fine Motor, Urban, Rural

1 Introduction

The transition that leads to a child's growth and development begins with the fetus. Children grow gradually in all areas, in accordance with their developmental phases. It's common to refer to youth as the "golden age." According to RI Law No. 20 of 2003 on the National Education System, early childhood is defined as children between the ages of 0 and 6. Children's brain development is at its peak during the brain growth

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spurt phase, which is a time of incredibly rapid brain development, and this is also the time when their desire to learn is the strongest. Early years are when about 40% of human growth takes place, according to study [1]. The process of growth and development cannot be separated from the early years of life. Growth is linked to observable changes in the human body, like an increase in height and weight. As stated by [2], The process of change in development that is tied to enhancing one's talents is called development. A person goes through a process of change known as development from conception to adulthood [3]. Globally, impeded growth and development affect both developed and developing countries. While motor, social, and emotional abilities, linguistic competence, and cognitive ability are indications of development, weight, height, and head circumference are indicators of growth. Growing and developing Indonesian children still need a lot of supervision. The pace of growth and developmental delays is still rather considerable, with 5–10% of persons still having general developmental delays [4]. According to findings from past studies, obesity and malnutrition are two factors that may affect children's growth problems. Only a few of the factors include lifestyle, finances, level of physical activity, and place of residence. Prior studies found that 11.1% of families with obese children lived in rural locations, compared to 14.2% of households with children in metropolitan areas [5]. Additionally, based on geographical percentages, a study found that 12.1% of rural residents are undernourished, compared to 4.6% of urban residents who are extremely thin and 7.5% who are underweight [6]. Various efforts must be made to recognize and understand growth at the beginning of life so that development is optimal and progresses according to age.

Adults who are knowledgeable about the needs of young children at each stage of their development might design activities, stimulate media, or create educational games to aid in children's growth. The best strategy to accomplish excellent quality child development is to make sure that changes and growth in the development of children occur in a consistent, age-appropriate manner. To track changes in motor development, identify developmental delays, deal with health issues, and help design exercise programs appropriately and optimally, early detection of the development of gross motor skills during the preschool and elementary school years is crucial [7]. According to earlier research measuring the level of gross motor skills in Kindergarten students aged 5–6 years, there were 13 children with a score > 130 in the very high category, 9 children with a score of 121–130 in the high category, 4 children with a score of 111–120 in the above average category, and 1 child gets a score of 90–110 in the average category. The results show that kindergarten students at these schools typically have incredibly high gross motor skills [8].

Improved development is one of the main concerns with children's growth and development. The main anthropometric indices are used to gauge and assess human growth. Early growth and development detection entails taking measures or carrying out an examination to spot growth and development differences in infants and preschoolers at a young age [9]. Once the results of the measures are known, early detection is necessary to carry out the proper therapy. The United Nations Children's Fund (UNICEF) reports that Indonesia has the fourth-highest population of children in the world in 2018 [10]. In Indonesia, there are about 21,990,000 preschoolers. Of these, however, 56.34% of preschool-aged children in Indonesia experience developmental

delays due to health issues. According to data on child development abnormalities, early child development is detected in 45.12% of the provinces. According to a report from the Indonesian Ministry of Health, as many as 0.4 million (16%) children under the age of five in Indonesia suffer from developmental disorders, including hearing impairment, low IQ, speech delays, and delays in gross and fine motor skills.

Children's motor skills allow them to employ physical activity to explore their surroundings. By influencing the feelings people experience while participating in social activities, physical skills can also promote interpersonal interactions and the growth of socioemotional components [11]. Children's gross motor skills are related to their ability to manipulate large body components. Children's gross motor skills may influence their confidence when interacting with their peers and people nearby [12]. Gross motor skills, often known as fundamental movement skills, include locomotor and object-control (manipulative) movement abilities. Running and leaping are examples of physical propulsion maneuvers that fall under the category of locomotion. Ball skills are also referred to as control object movement abilities because they are a necessary component of throwing or kicking a ball [13]. On the other hand, the underdevelopment of early infancy fine motor skills frequently affects the motor characteristics of today. Their smooth muscular motion is still limited, making it possibly hard for them to complete learning tasks by themselves [14]. Children who have developed their motor skills benefit from learning new things and adjusting to their surroundings, as motor development itself has a big impact on how a person moves during daily activities. It is essential for a child's future growth to fully develop their motor skills in their early years.

Both urban and rural settings must be used for the anthropometric measurements and motor skill evaluations of young children. The future development of early children anthropometry and motor skills can be optimized by identifying the advantages and disadvantages of the many attributes that both urban and rural areas have. It is also possible to discover how to best support young children's anthropometry and motor skills development and improvement, as this will affect the subsequent stage of development.

2 Methods

In this paper, a comparative survey method is paired with a quantitative methodology. The results of tests to evaluate the growth of motor abilities and anthropometric measurements are reported using a descriptive quantitative technique. This study comprised 20 (twenty) children from each of Malang's TK Hudan Cendikia and TK Al Hidayah, as well as all class A students between the ages of 3 and 5.

This study was done for Al Hidayah Kindergarten on March 4 and Hudan Cendikia Kindergarten on April 5 and 6, respectively. Naturally, the parents and teachers at the various kindergartens have approved of this study. Additionally, the Malang Health Polytechnic's KEPK (Health Research Ethics Commission) issued an ethical test for this study under registration number 618/KEPK-POLKESMA/2022. This subject featured up to 20 Hudan Scholars in Kindergarten out of the total TK pupils. A group of 24 students had 1 missing student on the first day and 3 absent students on the second

day because of the investigation. In the meantime, 20 TK students took part in the research study at TK Al Hidayah. A group has 22 members because up to two pupils, including a child, need special services.

By using stadiometers to measure height, digital scales to assess weight, and body meters to measure arm and leg length, this study directly measured the anthropometric traits of the individuals. When using the Gross Motor Development Second Edition Test (TGMD-2), each movement is repeated twice to evaluate gross motor skills. Running, galloping, hopping, leaping, sliding, two-handed striking, stationary bouncing, catching, kicking, overhand throwing, and underhand rolling are actions that are used to gauge the development of gross motor skills. Additionally, using two different picture objects, the cutting and coloring exercises are part of the fine motor development exam.

A manual data analysis method that was tailored to the curve was used to determine the BMI status, gross motor skills, and fine motor skills. The analysis step was then completed using Microsoft Excel and a statistical processing program like SPSS. The use of univariate analysis in this data analysis strategy aims to provide a summary or an explanation of the measured and reported results for each variable. The Mann Whitney test is used for bivariate analysis involving two variables that should fluctuate.

3 Results

3.1 Description of Body Mass Index (BMI) in Urban and Rural Areas

Data from Body Mass Index (BMI) measurements can be divided into four categories: skinny, normal, overweight, and obese. Table 1 shows the frequency of children according to their level of body mass index.

Table 1. Distribution of sample frequencies based on body mass index measurements

BMI	Region				Total	
	Urban		Rural			
	n	%	n	%	n	%
Underweight	19	95	19	95	38	95
Normal	0	0	1	5	1	2.5
Overweight	1	5	0	0	1	2.5
Obesity	0	0	0	0	0	0
Total	20	100	20	100	40	100

According to table 1, children with a body mass index (BMI) in the thin category have a percentage of 95% (38 samples), normal BMIs have a percentage of 2.5% (1 sample), overweight BMIs have a percentage of 2.5% (1 sample), and obesity BMIs have a percentage of 0% (none). Children with a thin category Body Mass Index (BMI) have a proportion of 95% (19 samples) in urban regions, compared to 0% for normal, 5% or more overweight, and 0% for obese children. Children in rural areas who fall under the thin body mass index (BMI) category make up 95% (19 samples), the normal

category makes up 1% (1 sample), the normal category falls under the overweight category, and the obesity category makes up 0% (none).

3.2 Description of Gross Motor Ability (MK) in Urban and Rural Areas

The seven categories of gross motor ability data from the Gross Motor Development Test (TGMD) are very high, high, above average, average, below average, low, and very low. Table 2 shows the frequency distribution of kids dependent on their level of gross motor development.

Table 2. Sample frequency distribution based on gross motor skills tests

Gross Motor	Region				Total	
	Urban		Rural			
	n	%	n	%	n	%
Very high	0	0	0	0	0	0
Tall	1	5	1	5	2	5
Above average	1	5	2	10	3	7.5
Average	9	45	15	75	24	60
Below average	6	30	2	10	8	20
Low	2	10	0	0	2	5
Very low	1	5	0	0	1	2.5
Very high	0	0	0	0	0	0
Total	20	100	20	100	40	100

On the basis of able 2, it can be seen that the percentage of kids who fall into the very high category is 0%, the high category is 5% (2 samples), the category above the average is 7.5% (3 samples), the average category is 60% (24 samples), the category below the average is 20% (8 samples), the 5% low category is 2 samples, and the very low category is 2.5% (1 sample). For children in urban areas, the percentage of those in the very high category is 0% (none), those in the high category are 5% (1 sample), those in the above-average category are 5% (1 sample), those in the average category are 45% (9 samples), those in the below-average category are 30% (6 samples), those in the low category are 10% (2 samples), and those in the very low category are 5%. (1 sample). A percentage of 0% (none), high categories of 5% (1 sample), categories above the average of 10% (2 samples), average category of 75% (15 samples), category below the average of 10% (2 samples), low category, and very low category of 0% (none) are found in rural areas for children.

3.3 Description of Fine Motor Ability (MH) in Urban and Rural Areas

The results of the cutting and pasting test can be categorized into four groups: very good, good, sufficient, and poor. Table 3 displays the frequency of children by their level of fine motor development.

Table 3. Sample frequency distribution based on fine motor skills tests

Fine Motor	Region				Total	
	Urban		Rural			
	n	%	n	%	n	%
Very good	13	65	14	70	27	67.5
Good	7	35	4	20	11	27.5
Enough	0	0	2	10	2	5
Not enough	0	0	0	0	0	0
Total	20	100	20	100	40	100

Table 3 shows that children in the very good category have a percentage of 67.5% (27 samples), followed by the good category with a percentage of 27.5% (11 samples), the sufficient category with a percentage of 5% (2 samples), and the less category with a percentage of 0% (There Isn't Any). A very good category percentage for urban settings for kids is 65% (13 samples), followed by good category percentages of 35% (7 samples), acceptable category percentages of 0% (none), and less category percentages of 0%. Children in the very good category make up 70% of the sample population in the rural area, followed by the good category with 20% (4 samples), the sufficient category with 10% (2 samples), and the less category with 0% (none).

3.4 Comparative Description of BMI in Urban and Rural Areas

Table 4 shows that there is no differences in BMI were found between kindergarten students in Malang's urban and rural districts, according to test results produced using Mann Whitney with a p value of 0.725.

Table 4. Distribution of differences in BMI conditions in early childhood

BMI	Region				Asymp Sig. (2-tailed)
	Urban		Rural		
	n	%	n	%	
Underweight	19	95	19	95	0.725
Normal	0	0	1	5	
Overweight	1	5	0	0	
Obesity	0	0	0	0	
Total	20	100	20	100	

3.5 Comparative Description of Gross Motor in Urban and Rural Areas

According to results table 5, which was derived from test results using Mann Whitney, there is a difference between kindergarten students in Malang's urban and rural districts in terms of their motor skills. The p value for this finding is p 0.049.

Table 5. Distribution of differences in gross motor skills in early childhood

Gross Motor	Region				Asymp Sig. (2-tailed)
	Urban		Rural		
	n	%	n	%	
Very high	0	0	0	0	0.049
Tall	1	5	1	5	
Above average	1	5	2	10	
Average	9	45	15	75	
Below average	6	30	2	10	
Low	2	10	0	0	
Very low	1	5	0	0	
Very high	0	0	0	0	
Total	20	100	20	100	

3.6 Comparative Description of Fine Motor in Urban and Rural Areas

Based on results table 6 distribution difference ability motor fine child age early demonstrating that from test results using Mann Whitney were produced, the p value is p 0.813 which suggests No there is difference in kindergarten students in urban and rural areas of Malang in terms of ability motor subtle.

Table 6. Distribution of differences in fine motor skills in early childhood

Fine Motor	Region				Asymp Sig. (2-tailed)
	Urban		Rural		
	n	%	n	%	
Very good	13	65	14	70	0.813
Good	7	35	4	20	
Enough	0	0	2	10	
Not enough	0	0	0	0	
Total	20	100	20	100	

3.7 BMI data description, arm span, leg length, gross motor, and fine motor

Table 7 demonstrates that children's Body Mass Index (BMI) in metropolitan regions ranges from a minimum of 11.3, a maximum of 15.3, and an average of 14.6. Children in rural settings, meanwhile, have an average score of 14.8 with a range from 11.7 to 22.5. Children in cities have an Arm Span (RL) score that ranges from 97 to 127, with an average of 14.6. The average score for children living in rural areas is 103, with a minimum score of 94 and a high score of 117. Children in metropolitan environments have limb lengths (PT) that range from 44 to 71, with an average value of 56. Children in rural areas, meanwhile, have an average score of 55, a minimum score of 46, and a maximum score of 65. Children in urban regions' Gross Motoric Ability (MK), with a minimum score of 67, a maximum score of 133, and an average score of 93.5. Children in rural areas, meanwhile, have an average score of 100, a minimum

score of 85, and a maximum score of 121. Urban children's test results range from a minimum of 10, a maximum of 16, and an average of 13.3 points. Meanwhile, children in rural areas have a minimum score of 8, a maximum score of 15, and an average of 13.1.

Table 7. Description of BMI data, arm span, leg length, gross motor, and fine motor

	Urban					Rural				
	BMI	**RL**	**PT**	**MK**	**MH**	**BMI**	**RL**	**PT**	**MK**	**MH**
Minimum Value	11,3	97	44	67	10	11,7	94	46	85	8
Maximum Value	25,3	127	71	133	16	22.5	117	65	121	15
Average	14,6	109	56	93.5	13,3	14,8	103	55	100	13,1

Information :
BMI : Body Mass Index RL : Arm Span
PT : Leg Length MK:Gross Motoric
MH : Fine Motoric

4 Discussion

Children who were slender had a higher Body Mass Index (BMI) than those who were normal weight, overweight, or obese, according to studies on the anthropometric characteristics of young children in Malang's urban and rural populations. When urban and rural locations are combined, the result is the average early childhood BMI in the thin group. There is no difference between the two regions, according to the study's results. The measuring of the human body's width, length, diameter, ratios, and proportions using two or more measurements is known as anthropometry. This can be used to determine the shape, size, and topography of the human body. Furthermore, according to past studies, among 153 kindergarten students, more children had a thin BMI (Body Mass Index), which is around 68%, than a fat BMI. The research's findings also show that each child spends 3 to 4 hours studying material that focuses on fine motor development, whereas just an hour is spent studying material for gross motor development. In addition to having a low BMI, this is also true. It has been shown in previous studies that preschool developing areas in South Asia experience the health concern of overweight children. The contributing aspect is that maternal weight has a negative impact on birth outcomes, which is linked to preschoolers who are overweight [15]. Additionally, although though the prevalence of overweight found in this study is lower than in industrialized countries, it is rapidly increasing in Nepal because of kids' unhealthy eating habits and sedentary lifestyles, especially in cities [16]. Unlike the study, which focused on the impact of maternal education, child age, and poverty on the nutritional status of Ghanaian children under the age of five. Additionally, it illustrates the connections between poor lifestyle choices, childhood malnutrition, and inadequate neonatal and young child feeding practices. Children who have just finished weaning and have been given MP-ASI need particular care because this is a critical period in their

development. Knowing Ghana's childhood malnutrition risk factors may help with resource allocation to areas and sociodemographic groupings with unique needs. [17].

Children who take the Gross Motor Development Test (TGMD-2) display average levels of gross motor development in both urban and rural settings, according to research. This outcome is in line with past research, which found that young children (ages 3 to 5) who took tests utilizing the TGMD-2 instrument received an overall average score for locomotor motions and control objects [18]. The second edition of the Test to Measure Gross Motor Development (TGMD-2) is one of the most widely used tools for assessing children's results in gross motor development [19]. Results from past studies revealed that there were variations in the outcomes of gross motor abilities despite differences in residency, particularly between urban and rural areas. This is in line with recent research that revealed that kindergarteners in rural (rural) settings outperformed kindergarteners in urban settings on assessments of gross motor skills. (urban). This study shows that kindergarten pupils in rural areas do better on tests of their gross motor skills. Research suggests that each area must be unique because of a range of elements that affect how each child's motor skills mature. Economic inequalities, familial and educational contexts, way of life, and parenting techniques for children are some of these factors. Previous studies showed that rural (rural) locations had large school grounds so that children could be more flexible when participating in physical activities at school, whereas urban (urban) regions had a limited quantity of land with a lot of students. Accordingly, it was discovered that there were differences between the results of assessments of gross motor skills in urban and rural settings, with kids in rural regions performing better than kids in urban areas on these exams [20]. The variations in the gross motor skills of Malang kindergarten students from urban and rural areas were investigated through research. Since schools in urban areas had larger land plots than those in rural ones, the criteria in the researchers' research were adversely correlated to those in earlier studies. The main lure for researchers is to show the results of tests of kids' gross motor skills in both urban and rural areas. The results of the study's statistical analysis revealed that the gross motor abilities of kindergarten students in Malang's urban and rural regions varied. In comparison to rural areas, metropolitan areas do worse on the gross motor skills exam. The combination of several factors, which researchers have seen during the study, leads to this. There are several of these, such as the inverse relationship between urban and rural students' levels of activity, the fact that students in urban areas are less motivated to engage in physical activity than students in rural areas are, and the fact that urban students are less active when obliged to do so. These results, however, disagree with earlier research employing the Mann-Whitney test, which demonstrated no differences in gross motor skills between kindergarten pupils in urban (urban) regions and rural (rural) areas [21].

Children's physical motor development needs to be maximized from a young age. Gross and fine motor development make up motor development. Fine motor abilities often mature more slowly than gross motor skills. Children must therefore receive balanced stimulation to guarantee that fine motor and gross motor development occurs concurrently and in rhythm. They will be able to learn both big and little muscle actions thanks to this. 2018's [22]. Children need more advanced physical skills and mental preparation to develop fine motor skills, especially during the kindergarten year. The

finger and arm muscles are trained using fine motor skills in a variety of activities, such as eating, dressing, writing, cutting, and donning little objects [23].

According to the study's conclusions, both urban and rural children demonstrated strong levels of fine motor skills based on tests using cutting and pasting tasks, which are classified as very good. The comparison of the fine motor skills of Malang kindergarten students from urban and rural areas was another goal of this study. The study's findings showed that kindergarten students' levels of fine motor skills were comparable in Malang's urban and rural regions. Because the scope of this study is limited to a discussion of anthropometric conditions using Body Mass Index assessment using body weight and height, gross motor skills using TGMD-2, and fine motor skills using cutting and pasting activities, the researchers suggest additional research on activities for young children who can use a measuring device, specifically the accelerometer.

5 Conclusion

Based on research findings, it was found that second-area BMI measurements in Malang's urban and rural regions were in the "skinny" range for young children attending kindergarten. In urban areas, the measurement range for the arm is frequently 109 cm, whereas in rural areas, it is usually 103 cm. The measurement range for long limbs is usually 56 cm in urban areas and 55 cm in rural ones. erratic motor function the second urban area includes both urban and rural areas that belong to the average category. as well as fine motor skills Both urban and rural areas fall under the same extremely good category. The results of the research test's motor rough showed a difference between the two locations, and the test's results of measuring ability motor fine showed variations. It also creates a BMI measurement p value in study that reveals No BMI status varies. No, there are no differences in the exam results between the rural and urban kindergartens in Malang.

Author's Contribution

EA, DSY, and SAS contributed to conceive and design the study. EA also contributed to collect the data and perform the analysis. All authors wrote the paper.

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References

1. M. Khaironi, "Perkembangan Anak Usia Dini," J. Golden Age, vol. 2, no. 01, p. 01, Jul. 2018, doi: 10.29408/goldenage.v2i01.739.

2. S. Hartati, Zulkifli, and Hukmi, “Analisis Kemampuan Motorik Kasar Anak Usia 5-6 Tahun di TK Pertiwi Kecamatan Pujud Kabupaten Rokan Hilir,” J. Pendidik. Tambusai, vol. 4, no. 2, pp. 931–938, 2020.
3. U. Latifah, “Aspek Perkembangan pada Anak Sekolah Dasar: Masalah dan Perkembangannya,” Acad. J. Multidiscip. Stud., vol. 1, no. 2, pp. 185–196, Dec. 2017, doi: 10.22515/academica.v1i2.1052.
4. T. H. SN, S. Mulyani, M. H. Harahap, H. S. B. Bara, and Andriani, “Pengukuran Status Gizi Pada Anak Pra Sekolah Di TK Asisyah VII Kota Pekanbaru,” J. Character Educ. Soc., vol. 5, no. 1, pp. 198–208, 2022, [Online]. Available: https://journal.ummat.ac.id/index.php/JCES/article/view/6766.
5. F. Kusumaningrum and S. Sudikno, “Faktor-Faktor Yang Berhubungan Dengan Kegemukan Pada Anak Balita 24-59 Bulan Di Indonesia Tahun 2010 (Analisis Lanjut Riskesdas 2010),” GIZI Indones., vol. 35, no. 1, p. 41, Jul. 2018, doi: 10.36457/gizindo.v35i1.292.
6. Kemenkes RI, “Hasil Riset Kesehatan Dasar Tahun 2018,” Kementrian Kesehat. RI, vol. 53, no. 9, pp. 1689–1699, 2018.
7. B. Zablotsky, L. I. Black, and S. J. Blumberg, “Estimated Prevalence of Children With Diagnosed Developmental Disabilities in the United States, 2014-2016,” NCHS Data Brief, no. 291, pp. 1–8, 2017.
8. D. A. Setyawan, H. Hadi, and I. F. Royana, “Kemampuan Motorik Kasar Anak Usia 5-6 Tahun Di Tk Negeri Pembina Kota Surakarta,” J. Penjakora, vol. 5, no. 1, pp. 17–27, 2018.
9. S. F. Rahayu, E. Anggeriyane, and M. Mariani, “Upaya Penguatan Program Stimulasi, Deteksi Dan Intervensi Dini Tumbuh Kembang (SDIDTK) Melalui Pemeriksaan Antropometri Pada Anak Prasekolah,” J. EMPATI (Edukasi Masyarakat, Pengabdi. dan Bakti), vol. 2, no. 1, p. 71, Apr. 2021, doi: 10.26753/empati.v2i1.522.
10. E. K. S. Riyadi and S. Sundari, “Tingkat pengetahuan orang tua tentang stimulasi perkembangan anak pra sekolah usia 60-72 bulan,” J. Ilmu Kebidanan, vol. 6, no. 2, pp. 59–75, 2020.
11. A. Restu Ananda, S. Tesabela Messakh, and Dary, “Gambaran Status Gizi dan Perkembangan Motorik Anak Usia 3-5 Tahun Di Kelurahan Pulutan, Salatiga,” J. Sains dan Kesehat., vol. 2, no. 4, pp. 472–479, Dec. 2020, doi: 10.25026/jsk.v2i4.251.
12. B. Mahmud, “Urgensi Stimulasi Kemampuan Motorik Kasar Pada Anak Usia Dini,” Didakt. J. Kependidikan, vol. 12, no. 1, pp. 76–87, Jun. 2019, doi: 10.30863/didaktika.v12i1.177.
13. S. A. Tomaz et al., “Gross motor skills of South African preschool-aged children across different income settings,” J. Sci. Med. Sport, vol. 22, no. 6, pp. 689–694, Jun. 2019, doi: 10.1016/j.jsams.2018.12.009.
14. A. Sutini, M. Rahmawati, M. Kemampuan, and M. Halus, “Development ability of fine motor Skillin early childhood Trough BALS learning model,” pp. 49–60.
15. K. L. Harding, V. M. Aguayo, and P. Webb, “Trends and Correlates of Overweight among Pre-School Age Children, Adolescent Girls, and Adult Women in South Asia: An Analysis of Data from Twelve National Surveys in Six Countries over Twenty Years,” Nutrients, vol. 11, no. 8, p. 1899, Aug. 2019, doi: 10.3390/nu11081899.
16. S. kharel, “Associated Risk Factors and Prevalence of Overweight Among Pre-school Children of Bhaktapur, Nepal,” Int. Ann. Med., vol. 1, no. 3, 2017, doi: 10.24087/iam.2017.1.3.87.
17. J. E. Ewusie, J. Beyene, C. Ahiadeke, and J. S. Hamid, “Malnutrition in Pre-school Children across Different Geographic Areas and Socio-Demographic Groups in Ghana,” Matern. Child Health J., vol. 21, no. 4, pp. 797–808, 2017, doi: 10.1007/s10995-016-2173-z.
18. B. K. Kit, L. J. Akinbami, N. S. Isfahani, and D. A. Ulrich, “Gross Motor Development in Children Aged 3–5 Years, United States 2012,” Matern. Child Health J., vol. 21, no. 7, pp. 1573–1580, Jul. 2017, doi: 10.1007/s10995-017-2289-9.

19. S. L. C. Veldman, R. A. Jones, and A. D. Okely, “Efficacy of gross motor skill interventions in young children: an updated systematic review,” BMJ Open Sport Exerc. Med., vol. 2, no. 1, p. e000067, Jan. 2016, doi: 10.1136/bmjsem-2015-000067.
20. A. Satria, “Perbandingan Motorik Kasar Murid TK Pertiwi Di Kecamatan Padang Barat Di Provinsi Sumatera Barat (Daerah Perkotaan) dan Murid TK Alhidayah Desa Pulau Rambai Kecamatan Kampar Timur Provinsi Riau (Daerah Pedesaan),” Al Abyadh, vol. 3, no. 1, pp. 37–51, 2020.
21. A. Aulia and S. Batubara, “Perbedaan Perkembangan Motorik Antara Anak Taman Kanak Kanak di Daerah Perkotaan dan Pedesaan Menggunakan Instrument Denver II,” Best J. (Biology Educ. Sains Technol., vol. 2, no. 2, pp. 48–55, Oct. 2019, doi: 10.30743/best.v2i2.1818.
22. D. Nurjannah, “Peningkatan Kemampuan Motorik Halus Anak Kelompok A Melalui Kegiatan Bermain Papercraft,” J. AUDI, vol. 3, no. 1, p. 7, Jun. 2018, doi: 10.33061/ad.v3i1.2068.
23. S. Agustina, M. Nasirun, and D. D., “Meningkatkan Keterampilan Motorik Halus Anak Melalui Bermain Dengan Barang Bekas,” J. Ilm. Potensia, vol. 3, no. 1, pp. 24–33, Jan. 2019, doi: 10.33369/jip.3.1.24-33.