**ORIGINAL RESEARCH** 

Open Access

Physical Education and Sport: Studies and Research

#### Physical Activity Levels Survey of Early Childhood

Livia Mala Anjelina<sup>1\*</sup>, Supriatna<sup>2</sup>, Nurrul Riyad Fadhli<sup>3</sup>

1.2.3 Universitas Negeri Malang, Jl. Semarang 5 Malang, East Java Province, 65145, Indonesia

Submitted : December 19, 2021 Accepted: January 7, 2022 Published: March 1, 2022

#### Abstract

Background: Teachers and parents need to know and understand the importance of physical activity in pre-school-age children. Good physical activity will affect children's development, both in motor and cognitive aspects that can support learning achievement at school.

Objectives: This study aimed to determine the level of physical activity of PAUD Al-Abada students aged 4-5 years in Kediri City with a total of 11 students using the TGMD (Test of Gross Motor Development) test.

Methods: The method used in this research is descriptive quantitative, which aims to provide a real picture of what is in the field about the physical activity of Al-Abada early childhood students aged 4-5 years in the city of Kediri.

Results: From the results of the tests that have been carried out, the results of the locomotor test have an average of 33.04 (Above Average), and the object control test obtained an average of 38.54 (above average). The overall data shows that children are categorized as Very poor (0%), poor (0%), bellows average (9%), average (18%), above average (37%), superior (18%), very superior (18%).

Conclusion: Based on the tests that have been carried out, it can be concluded that the locomotor and object control results showed above-average values.

Keywords: Physical activity, TGMD-2, early childhood education.

\*Correspondence: <u>liviaanjelina2@gmail.com</u>

Livia Mala Anjelina

Faculty of Sports Science, Universitas Negeri Malang, Jl. Semarang No 5, Malang, East Java Province, 65145, Indonesia



<sup>© 2022</sup> The Author(s). Open Access. This is an Open Access article distributed under the terms of the Creative Commons Attribution-ShareAlike 4.0 International License.

## INTRODUCTION

Early Childhood Education (PAUD) is a form of education for children under five years. However, many problems still need special attention (Mexitalia et al., 2012). The average preschool education currently only focuses on academic learning. The actual concept of early childhood education is learning while playing (Priyanto, 2014). Physical education lessons have an important role and need to be given to early childhood through physical activities carried out (Ulpi et al., 2021). Not only the role of educators, but the role of families, especially parents, is very important in developing the potential of children. Parents themselves must know how important it is to provide physical activity for children at home (Handayani et al., 2017). Having quality physical fitness can pass on benefits in terms of both physical and psychological and is very influential on learning achievement when at school (Siregar, 2018). Physical fitness has a relationship with children's learning achievement because children are accustomed to socializing and carrying out daily activities with many positive activities (Siregar, 2018).

This research is motivated by the importance of providing physical activity to preschool-age children to help them develop according to their age stages. In this case, many parents and teachers have not paid enough attention to basic things, especially physical activity, even though this is an initial foundation for the formation of quality children (Utoyo et al., 2020). Therefore, parents and teachers are required to understand and know the important aspects that need to be considered in training children's physical activities both at school and at home (Shabarina et al., 2018). Such as the importance of recognizing early childhood activities and recognizing early childhood psychology. Sukamti (2017) also explained that early childhood motor development is as important as other aspects of development, such as cognitive and psychological. Suppose the child cannot perform physical movements properly. In that case, it will impact a lack of confidence and a negative self-concept in carrying out physical movements, which will affect the child's achievement at school (Martani & Psychology, 2012).

The problem faced is that children still carry out passive activities such as watching television, playing with smartphones, etc. Even though the importance of physical activity is given to children so that later children can have good physical fitness and develop related motor and cognitive as stated (Chatib, 2021). Providing physical activity programs using a gross motor skills approach to early childhood will have a good impact, especially in terms

of physical fitness, which will later be in harmony with their motor and cognitive qualities. According to (Fotrousi et al., 2012), basic movement skills that are very important for early childhood are divided into two forms, namely locomotor and control objects. Locomotor motion is a movement that moves the body from one place to another while the control object receives or sends an object or object. For this reason, this study uses the TGMD test, which will reveal the basic abilities and levels of movement in each Children's basic movement skills then. Next, the researcher will provide the right alternative solution in overcoming it (Oktarifaldi et al., 2019).

The purpose of this study was to determine the physical activity of Al-Abada early childhood students aged 4-5 years in the city of Kediri by using the TGMD test (Test of Gross Motor Development). The test results and categories show whether there are children in the very superior, superior, above average, average, below average, poor, and very poor categories. It is hoped that a teacher and student guardians can use the results of this study as an initial basis to pay more attention to physical activity, especially in early childhood. So that later, the teacher can make an appropriate learning program according to the fundamental stage of motor skills, and parents provide activities related to good physical activity for children to develop according to their age and stimulate motor skills and intelligence (Farida, 2016).

## **METHODS**

# Study Design and Participants

The research method used is a quantitative research method with a descriptive approach. Sukmadinata (2013) states that descriptive research is a research method to describe existing phenomena that are currently or in the past. According to Budiwanto (2017), descriptive research is a research plan that aims to describe or describe in a systematic, factual, and objectively accurate manner. So, this study aims to describe (explain) events that occur systematically, emphasizing disclosing data based on facts obtained from the field. The subjects of this study were 11-year-old Al-Abada early childhood students in Kediri City in 2021.

# Research Instruments

This study uses instruments from Oktarifaldi et al. (2019) from the book Test of Gross Motor Development Second Edition, and uses two tests, namely Non-Locomotor and Object Control. The Non-Locomotor Test consists of 1) Run, 2) Gallop, 3) Hop, 4)

Leap, 5) Horizontal Jump, 6) Slide. The Object Control test consists of 1) Two-Hans Strike, 2) Stationary Bounce, 3) Catch, 4) Kick, 5) Overhand Throw, 6) Underhand Roll. The place used in this study was the Al-Abada early childhood classroom when the research was carried out in August 2021.

# **Data Analysis**

This descriptive study aims to provide a real picture of the physical activity of Al-Abada early childhood students aged 4-5 years in Kediri City in 2021. The data analysis used in this study used quantitative descriptive analysis techniques with percentages and percentages. The researcher divides the test into five categories, namely very good, good, sufficient, less, and very poor, then the percentage will be determined.

# **RESULTS**

The overall research results on Al-Abada PAUD students aged 4-5 years in Kediri City in 2021 are presented in Table 1 below.

Table 1. Description of TGMD-2 Non-Locomotor and Object Control Test

No.	Category	Mean	Minimum	Maximum	Category
1	Locomotor	33,54	16	44	Above Average
2	Object Control	38,54	28	48	Above Average

Non-Locomotor instruments have a mean or average of 33.54 with a minimum or the lowest value of 16 and a maximum value or the highest value of 44, categorized as Above Average or above the average. The Object Control instrument has a mean or average of 38.54 with minimum or the lowest value of 28, and the maximum value or the highest value of 48, which is categorized as Above Average or above the average.

**Table 2.** Test results of Gross Motor Development Two Edition (TGMD-2)

No.	Category	Frequency	Percentage
1	Very Poor	0	0%
2	Poor	0	0 %
3	Below average	1	9%
4	Average	2	18%
5	Above average	4	37%
6	Superior	2	18%
7	Very Superior	2	18%

From table 2, it can be concluded that the physical activity of Al-Abada PAUD students aged 4-5 years in Kediri City in 2021 based on the Test of Gross Motor Development Two Edition (TGMD-2) in the Above Average category or above average.

## **DISCUSSION**

The importance of teachers and parents understanding aspects of physical activity, especially at the fundamental stage, will significantly affect the child's development (Carson et al., 2017). In the fundamental stage, many aspects need to be considered related to early childhood activities and the importance of the trainer understanding early childhood psychology. According to Setiawan (2019), giving a portion of excessive physical activity to children is one of the factors that can cause excessive fatigue in children. The importance of providing appropriate physical activity at the stage. As explained Takken et al. (2020), providing training for early childhood by paying attention to basic movements, playing, and doing interesting activities can help children develop optimal physical and psychosocial effects on children (Farida, 2016). From this, teachers and parents need to provide appropriate physical activity according to their age so that children can develop well (Rismayanthi, 2013).

Having good physical fitness can be beneficial for children in carrying out their daily activities both at school and at home (Farida, 2016). To support physical fitness in children, teachers and parents should provide motivation and facilitate so that children enjoy doing things that smell like physical activity to help maintain their physical fitness (Rohmah, 2016). Examples of good facilities at school such as providing learning methods while playing so that children are freer to move and develop the potential that exists in themselves, at home, parents can provide toys that invite them to move, such as giving them balls, kites, bicycles, taking them for walks roads, and others (Khomaeny et al., 2020). Parents need encouragement so that children are accustomed to physical activities, such as exercising (Nugraha, 2015).

In Sukamti's research (2017), it is explained that the importance of early childhood motor development is as important as other aspects of development, such as cognitive and psychological. Suppose the child cannot perform physical movements properly. In that case, it will impact a lack of confidence and negative self-concept in carrying out physical movements, affecting the child's learning achievement. It is also important to give physical movement in early childhood, as Yudanto (2020) said. The effect of basic movements on children needs to be given so that children have no difficulty doing these movements in the future. It was adopted from previous research that the importance of teachers in paying attention to children's physical activity and seeing their psychology can affect their level of

self-confidence, which will later affect children's learning achievement (Fitriani & Adawiyah, 2018).

Data on the level of physical activity did not find children in the very bad or bad category. This shows a balance between parenting patterns at home and patterns of learning by teachers at school (Suherman et al., 2020). In addition, getting used to a regular lifestyle is also something that affects the physical fitness of high and low children (Agata & Monyeki, 2018). Later, the results of this study can be used by teachers to provide better and more enjoyable learning related to physical activity so that children are also happy and interested in doing these activities. And can also add game items to attract children's attention. As well as for parents to provide new knowledge about the importance of providing quality physical activity for children at home to help improve children's motor and cognitive abilities which will also affect academic achievement at school.

## CONCLUSION

The findings show that the level of physical activity of children aged 4-5 years is in the above-average category. Teachers and parents need to encourage children to continue to do physical activities, one of which can be done by playing activities. The limitations of this study are the limited sample involved, further research is expected to involve more samples and investigate factors of residence (rural/urban), analyzed by gender, and so on to enrich studies on physical activity in early childhood.

#### CONFLICT OF INTEREST

The author hereby declares that this research is free from conflicts of interest with any party.

## **AUTHOR'S CONTRIBUTION**

Anjelina contributed to preparing concepts, formulating methods, and conducting research. Supriatna contributed to processing the results, interpreting, and drawing conclusions. Fadli contributed to editing the final version.

# References

Agata, K., & Monyeki, M. A. (2018). Association between sport participation, body composition, physical fitness, and social correlates among adolescents: The PAHL study. *International Journal of Environmental Research and Public Health*, *15*(12), 1–16. https://doi.org/10.3390/ijerph15122793

Budiwanto, S. (2017). Metodologi latihan olahraga. Malang: Uiversitas Negeri Malang, 2(2).

- Carson, V., Lee, E. Y., Hewitt, L., Jennings, C., Hunter, S., Kuzik, N., Stearns, J. A., Unrau, S. P., Poitras, V. J., Gray, C., Adamo, K. B., Janssen, I., Okely, A. D., Spence, J. C., Timmons, B. W., Sampson, M., & Tremblay, M. S. (2017). Systematic review of the relationships between physical activity and health indicators in the early years (0-4 years). *BMC Public Health*, 17(Suppl 5). https://doi.org/10.1186/s12889-017-4860-0
- Chatib, M. (2009). Sekolahnya manusia: sekolah berbasis multiple intelligences di Indonesia. Kaifa.
- Farida, A. (2016). Urgensi Perkembangan Motorik Kasar pada Perkembangan Anak Usia Dini. *Jurnal Raudhah*, 4(2), 1–10.
- Fitriani, R., & Adawiyah, R. (2018). Perkembangan Fisik Motorik Anak Usia Dini. *Jurnal Golden Age*, 2(01), 25. https://doi.org/10.29408/goldenage.v2i01.742
- Fotrousi, F., Bagherly, J., & Ghasemi, A. (2012). The Compensatory Impact of Mini-Basketball Skills on the Progress of Fundamental Movements in Children. *Procedia Social and Behavioral Sciences*, 46, 5206–5210. https://doi.org/10.1016/j.sbspro.2012.06.410
- Handayani, D. S., Sulastri, A., Mariha, T., & Nurhaeni, N. (2017). Penyimpangan Tumbuh Kembang Anak dengan Orang Tua Bekerja. *Jurnal Keperawatan Indonesia*, 20(1), 48–55. https://doi.org/10.7454/jki.v20i1.439
- Khomaeny, E. F. F., Ulfah, M., & Hamzah, N. (2020). Pengaruh Aktivitas Fisik Dan Lingkungan Alamiah Bagi Daya Tahan Tubuh Anak Usia Dini. *AWLADY: Jurnal Pendidikan Anak*, 6(2), 234. https://doi.org/10.24235/awlady.v6i2.6206
- Langendorfer, S. (2016). Test of Gross Motor Development. *Adapted Physical Activity Quarterly*, 3(2), 186–190. https://doi.org/10.1123/apaq.3.2.186
- Lopes, L., Santos, R., Pereira, B., & Lopes, V. P. (2013). Associations between gross motor coordination and academic achievement in elementary school children. *Human movement science*, 32(1), 9-20.
- Mahnun, N. (2016). Media Pembelajaran (Kajian terhadap Langkah-langkah Pemilihan Media dan Implementasinya dalam Pembelajaran). *An-Nida*'.
- Martani, W. (2012). Metode stimulasi dan perkembangan emosi anak usia dini. *Jurnal Psikologi*, 39(1), 112-120.
- Mexitalia, M., Sellina, H., Anam, M. S., Yoshimura, A., Yamauchi, T., Nurkukuh, N., & Hariyana, B. (2012). Perbedaan status gizi, kesegaran jasmani, dan kualitas hidup anak sekolah di pedesaan dan perkotaan. *Jurnal Gizi Klinik Indonesia*, 8(4), 182. https://doi.org/10.22146/ijcn.18216
- Nugraha, B. (2015). Pendidikan Jasmani Olahraga Usia Dini. *Jurnal Pendidikan Anak*, 4(1), 557–564. https://doi.org/10.21831/jpa.v4i1.12344
- Oktarifaldi, O., Syahputra, R., Nur, H., Rasyid, W., & Mariati, S. (2019). Implementation of Basic Motion Learning and Use of Test Instrument of Gross Motor Development (TGMD) in Evaluating Basic Motion Skills. *Jurnal Humanities Pengabdian Kepada Masyarakat*, 1(1), 1–9. https://doi.org/10.24036/jha.v1i1.3

- Priyanto, A. (2014). pengembangan kreativitas pada anak usia dini melalui Aktivitas bermain. *Jurnal Ilmiah Guru Caraka Olah Pikir Edukatif*, (2).
- Rismayanthi, C. (2013). Mengembangkan Keterampilan Gerak Dasar Sebagai Stimulasi Motorik Bagi Anak Taman Kanak-Kanak Melalui Aktivitas Jasmani. *Jurnal Pendidikan Jasmani Indonesia*, 9(1), 64–72.
- Rohmah, N. (2016). Bermain Dan Pemanfaatannya Dalam Perkembangan Anak Usia Dini. *Jurnal Tarbawi*, 13(2), 27–35.
- Setiawan, A. (2019). Faktor Timbulnya Cedera Olahraga. *Media Ilmu Keolahragaan Indonesia*, 1(1). https://doi.org/10.15294/miki.v1i1.1142
- Shabarina, A., Mediani, H. S., & Mardiah, W. (2018). Pola Asuh Orang Tua yang Menitipkan Anak Prasekolah di Daycare Kota Bandung. *Jurnal Pendidikan Keperawatan Indonesia*, 4(1), 68. https://doi.org/10.17509/jpki.v4i1.12344
- Siregar, N. M. (2018). Peningkatan Kecerdasan Interpersonal Melalui Aktivitas Fisik Anak Usia 4-5 Tahun. *JPUD Jurnal Pendidikan Usia Dini*, *12*(2), 291–300. https://doi.org/10.21009/jpud.122.10
- Suherman, A., Jajat, Rahayu, N. I., Sultoni, K., Risma, R., & Agust, K. (2020). *Early Childhood Physical Activity and Sedentary Behavior in Indonesia: Objectively Measure Using Accelerometer.* 21(Icsshpe 2019), 426–428. https://doi.org/10.2991/ahsr.k.200214.114
- Sukamti, E, R. (2017). Perkembangan Motorik Kasar Anak Usia Dini Sebagai Dasar Menuju Prestasi Olah Raga. Sport Science, Perkembangan Motorik Kasar Anak Usia Dini Sebagai Dasar Menuju Prestasi Olah Raga.
- Sukmadinata. (2013). Metode Penelitian Pendidikan. Bandung: PT. Remaja Rosdakarya.
- Takken, T., Giardini, A., Reybrouck, T., Gewillig, M., Hövels-Gürich, H. H., Longmuir, P. E., McCrindle, B. W., Paridon, S. M., & Hager, A. (2020). Recommendations for physical activity, recreation sport, and exercise training in paediatric patients with congenital heart disease: A report from the Exercise, Basic & Translational Research Section of the European Association of Cardiovascular Preventio. *European Journal of Preventive Cardiology*, 19(5), 1034–1065. https://doi.org/10.1177/1741826711420000
- Ulpi, W., Hakim, N., Kadir, A., Pajarianto, H., & Rahmatia, R. (2021). Gambaran Kebugaran Jasmani Anak Usia Dini pada Masa Pandemi Covid-19. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(1), 30–39. https://doi.org/10.31004/obsesi.v6i1.1197
- Utoyo, S., Juniarti, Y., Sari, N., & Mangge, K. (2020). Pendidikan Jasmani Untuk Anak Usia Dini: Pengembangan Fundamental Movement Skill (FMS)pada Anak. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(1), 404. https://doi.org/10.31004/obsesi.v5i1.605
- Yudanto. (2020). The influence of physical activity model based on perceptual motor skills on kindergarten students 'manipulative fundamental motor. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 6(1), 92–104.