



Correlation between Ball games and Fundamental Motor Skill of 4-5 Years Old Children at Jebres, Surakarta

Anastasia Lucky¹, Warananingtyas Palupi², Novita Eka Nurjanah³
^{1,2,3}Universitas Sebelas Maret



Article Information

Article History

Submitted:
January 2021
Approved:
February 2021
Published:
March 2021

Keywords:

Ball games
Fundamental Motor Skill

Abstrak

Tujuan penelitian ini untuk menguji hubungan antara *Ball games* dan *fundamental motor skill* anak usia 4-5 tahun. Penelitian ini dilaksanakan pada 4 TK di Kecamatan Jebres. Penelitian ini menggunakan pendekatan kuantitatif dengan metode korelasi antar 2 variabel. Subjek yang diambil dari penelitian ini berjumlah 86 orang tua atau wali anak usia 4-5 tahun, dari 4 TK yang ada di Kecamatan Jebres, Kota Surakarta. Teknik pengumpulan data yang digunakan berupa kuesioner serta wawancara. Pengumpulan data yang didapatkan dianalisis dengan uji prasyarat dan uji hipotesis. Uji prasyarat dalam penelitian korelasi menggunakan uji normalitas dan uji linearitas. Uji normalitas ini bertujuan untuk menguji apakah data berdistribusi normal atau tidak. Didapatkan pada uji prasyarat, hasil uji normalitas, bersignifikansi $0,200 > 0,05$ maka data berdistribusi normal. Sedangkan uji linearitas merupakan hubungan antar satu variabel dengan variabel lainnya. Hasil uji linearitas bersignifikansi $0,174 > 0,05$ yang berarti bahwa kedua variabel terdapat hubungan yang linear. Uji hipotesis pada penelitian ini menggunakan uji analisis *pearson*, mendapatkan $0,000 < 0,05$ yang berarti bahwa H_0 ditolak dan terdapat hubungan antar variabel tersebut. Interpretasi dari koefisien menunjukkan nilai 0,895 yang dinyatakan bahwa variabel *Ball games* dan variabel *fundamental motor skill* mempunyai korelasi yang sangat kuat.

Abstract

The present study aimed to examine the relationship between ball games and the fundamental motor skill of 4-5 years old children. Taking place in 4 kindergartens in Surakarta, a correlational study was applied. The participants were the parents or guardians of 4-5 years old children (n=86). The data were collected by distributing questionnaires and conducting interviews with parents. Prior to data analysis, normality, linearity, and hypothesis tests were performed. The result of the normality test showed a significance value of $0.200 > 0.05$. While the significance of linearity was $0.174 > 0.05$, which indicates a relationship between the two variables being studied. The hypothesis test result with analysis Pearson showed a significance value of $0,000 < 0,05$, indicating that there is a relationship between the ball games and the fundamental motor skill of 4-5 years old children. The correlation of the two variables was categorized as very strong, indicated by the correlation coefficient of 0.895



Jurnal Indria (Jurnal Ilmiah Pendidikan Prasekolah dan Sekolah Awal) is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

✉ Corresponding author:

E-mail: luckyaurelia@student.uns.com

ISSN 2579-7255 (Print)

ISSN 2524-004X (Online)

DOI: <http://dx.doi.org/10.24269/jin.v6n1.2021.pp62-68>

INTRODUCTION

Period of 0-6 years old is known to be the most effective period for improving children's potential and skills, and preparing their future, especially fundamental motor skills. Fundamental motor skills refer to a child's competence related to big muscle. That muscle strength involves the arm's and leg's muscle that is used to do certain activities, such as throwing a ball, jumping, and running. That movement is a basic skill for increasing physical activity techniques and sport activity for a children's lifetime (Bakhtiar, 2015).

Since there's a positive relationship between fundamental motor skills and children's physical daily activities (Bremer & Cairney, 2018), Parents and the surrounding environment should provide children with physical activities. Lack of stimulation of fundamental motor skills may result in delayed motor skills development. (Lubans et al., 2010).

It is important to train preschool-aged children's fundamental motor skills through physical activities. With adequate stimulation of physical activities, children's fundamental motor skills may be improved. Fundamental motor skill competence refers to preschool-aged children's physical activity development, active movements and then can be perfected with specific sports activity. There are three components of body movements, locomotor, non-locomotor, and manipulative movements. Locomotor movement is a body's movement from one place to another, for example: walking, running, rolling, and jumping. Non-locomotor movement is the skill of moving the limbs in one place, for example, lifting and pushing. Meanwhile, manipulative movement is a movement to control an object with hands and legs, for example, throwing, catching, and kicking a ball (Rismayanthi, 2013). These movements are crucial to be adequately stimulated in the early childhood period.

There are several indicators of fundamental motor skill for 4-5 years old children, including 1) Walking straight in the one line with feet on tiptoe, 2) walking backward, 3) jumping forward, 4) Swinging hands to throw a ball without assistance, 5) Throwing a ball with a distance of fewer than two meters, 6) Catching

Anastasia Lucky, Warananingtyas Palupi, Novita Eka Nurjanah. The Correlation between Ball games and Fundamental Motor Skill of 4-5 Years Old Children in Jebres, Surakarta

the ball, 7) kicking a ball towards the front and back. According to Syamsiah (2014), these skills could be improved through ball games. Cholik and Lutan (2001) propose some activities to implement the Ball games including activity is throwing, tracking and trapping, also kicking balls. Throwing a ball is the skill of pushing the ball through the air using different sizes and shapes of balls. Meanwhile tracking and trapping is the potential to coordinate vision. Meanwhile, kicking is the activity of pushing the ball from the ground or air using feet.

Grounded on the description above, the present study attempted to examine the relationship between ball games and fundamental motor skill competence of 4-5 years old children in four kindergartens in Jebres, Surakarta. Fundamental motor skill competence of children may be different from one to another, depending on the stimulations provided by parents and the environment. The purpose of the study was to examine the relationship between ball games and the development of 4-5 years old children's fundamental motor skills.

METHODS

A correlational study was applied in order to obtain the purpose of the study, i.e., finding the relationship between Ball games and children's fundamental motor skills. Taking place in four kindergartens in Jebres, Surakarta, this study involved parents and guardians of 4-5 years old kindergarten students in Jebres. This study took place in TK Indriyasana 3, TK Pembina, TK Paramayoga, and TK Budi Karya.

The population of this study comprised 86 students' parents/guardians. As Arikunto (2010:109) suggested, all members of the population were recruited as a sample of the study since they were less than 100. The data of the study were collected by deploying questionnaires and conducting interviews with parents. The participants were asked to fill a questionnaire consisted of fourteen items measuring fundamental motor skills and ten items measuring ball games. The questionnaire used a 4-point Likert scale, following Sugiyono's (2016) suggestion that removing neutral choice could make it easier for participants to fill the questionnaire.

Anastasia Lucky, Warananingtyas Palupi, Novita Eka Nurjanah. The Correlation between Ball games and Fundamental Motor Skill of 4-5 Years Old Children in Jebres, Surakarta

This research was conducted in four stages. The first stage was the preparation, including writing the research proposal, applying for a research permit, determining the research location, developing the research instrument, and testing the reliability of the instrument. In the second stage, the research was carried out. After carrying out the research, the collected data were processed in the third stage. In the last stage, the result and the conclusion of the study are presented.

The analysis data of this research use a quantitative correlation method, with the SPSS 22 for windows. Quantitative research was analyzing with a pre-condition test and hypothesis. In the pra-condition, there is a normality test and a linearity test. The normality test has a function to examine the data have a distributional normal or not. Meanwhile, a linearity test is a correlation between one variable with another variable.

RESULT AND DISCUSSION

The result showed that the lowest score of the ball games was 13 while the highest score was 40. The median value was 28.00 while the mode was 23. The mean score was 28.31 and the standard deviation was 6.470. Regarding the fundamental motor skills variable, the lowest score was 17 while the highest score was 56. The median was 43.50 while the mode was 51. The mean score was 45.92 and the standard deviation was 8.528.

A normality test was conducted to examine the normality of the data distribution. The data were considered normally distributed when the significance was higher than 0.05, whereas it was considered not normally distributed if the significance was less than 0.05. The significance value was found to be 0.200, meaning that the data were normally distributed. The linearity test was performed, the result showed a score of 0.174, indicating that the two variables fulfilled linear assumptions and there was a correlation between the independent variable and the dependent variable.

After performing normality and linearity tests, the hypotheses of the study were performed. Parametric statistics were applied because the data were normally distributed. Pearson analysis was applied using SPSS 22 for windows.

Anastasia Lucky, Warananingtyas Palupi, Novita Eka Nurjanah. The Correlation between Ball games and Fundamental Motor Skill of 4-5 Years Old Children in Jebres, Surakarta

The obtained significance value of the hypothesis testing was 0.000 while the Pearson correlation value obtained value was 0.895. The following table presents the result of the hypothesis test.

Table 1. The result of hypothesis test

		<i>ball games</i>	<i>fundamental motor skill</i>
<i>ball games</i>	Pearson Correlation	1	,895**
	Sig. (2-tailed)		,000
	N	86	86
<i>fundamental motor skill</i>	Pearson Correlation	,895**	1
	Sig. (2-tailed)	,000	
	N	86	86

Two hypotheses were proposed as follows:

H_0 = There is no correlation between ball games and fundamental motor skill for 4-5 years old children.

H_a = There is a correlation between ball games and fundamental motor skill for 4-5 years old children

The following criteria was applied to determine the result of the hypothesis test :

- a. Significance $> 0,05$ H_0 accepted
- b. Significance $< 0,05$ H_0 rejected

As displayed in the table, the significance value was 0.000, since it is lower than 0.05, H_0 was rejected and H_a was accepted. In other words, there is a relationship between ball games and 4-5 years old children's fundamental motor skills.

Based on the interpretation from the table of the correlation coefficient, the coefficient value between the two variables is 0.895, meaning that the relationship between ball games and fundamental motor skills is categorized as very strong. The result of this study supports Barnett et al.'s (2015) findings that physical activities and ball games are highly related to the development of children's fundamental motor skills. In other words, children's ball skill improvement may result in the development of their fundamental motor skills, and vice versa..

Anastasia Lucky, Warananingtyas Palupi, Novita Eka Nurjanah. The Correlation between Ball games and Fundamental Motor Skill of 4-5 Years Old Children in Jebres, Surakarta

CONCLUSION

The present study was conducted to examine the relationship between fundamental motor skills and ball games in 4-5 years old children. The processed data from questionnaires and interviews indicated that there is a relationship between the two variables. The statistical result showed that H_a stating that there is a relationship between fundamental motor skills and ball games in 4-5 years old children was supported, whereas H_0 was rejected. The Pearson correlation value of 0.895 indicated that the relationship between the two variables was very strong.

To conclude, there is a strong relationship between ball games and 4-5 years old children's fundamental motor skills, meaning that ball games activities may develop children's fundamental motor skills. Therefore, positive stimulation from parents and teacher is important to train children's fundamental motor skills, which will develop in the future..

REFERENCES

- Apit, W. (2012). Meningkatkan Kecerdasan Kinestetik Melalui Metode Bermain Menangkap Bola Kecil pada Kelompok A TK Pertiwi Luwuk Kabupaten anggai. *Jurnal Teknologi Pendidikan*. Diperoleh 18 Oktober 2020, dari eprints.uny.ac.id
- Bakhtiar, S. (2015). *Merancang Pembelajaran Gerak Dasar Anak*. Padang : UNP Press Padang
- Barnett, L. M., Ridgers, N. D., & Salmon, J. (2015). Associations between young children's perceived and actual ball skill competence and physical activity. *Journal of Science and Medicine in Sport*, 18(2), 167–171. <https://doi.org/10.1016/j.jsams.2014.03.001>
- Barnett, L. M., Ridgers, N. D., & Salmon, J. (2015). Associations between young children's perceived and actual ball skill competence and physical activity. *Journal of Science and Medicine in Sport*, 18(2), 167–171. <https://doi.org/10.1016/j.jsams.2014.03.001>
- Bremer, E., & Cairney, J. (2018). Fundamental Movement Skills and Health-Related Outcomes: A Narrative Review of Longitudinal and Intervention Studies Targeting Typically Developing Children. *American Journal of Lifestyle Medicine*, 12(2), 148–159. <https://doi.org/10.1177/1559827616640196>
- Cholik, T., & Lutan, R. (2001). Pendidikan Jasmani dan Kesehatan. Bandung: CV Maulana.
- Lubans, D. R., Morgan, P. J., Cliff, D. P., Barnett, L. M., & Okely, A. D. (2010). Fundamental movement skills in children and adolescents: Review of

- Anastasia Lucky, Warananingtyas Palupi, Novita Eka Nurjanah. The Correlation between Ball games and Fundamental Motor Skill of 4-5 Years Old Children in Jebres, Surakarta associated health benefits. *Sports Medicine*, 40(12), 1019–1035. <https://doi.org/10.2165/11536850-000000000-00000>
- 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. <https://doi.org/10.21831/JPII.V9I1.3065>
- Robinson, L. E. (2010). *The relationship between perceived physical competence and fundamental motor skills in preschool children*. *Child: Care, Health and Development*, 37(4), 589–596. doi:10.1111/j.1365-2214.2010.01187.x
- Sugiyono. (2014). *Metode Penelitian Kuantitatif, Kualitatif dan R&D* Bandung: AlfabetaCV.
- Sujiono, B. (2007). *Metode Pengembangan Fisik*. Jakarta :Universitas Terbuka.
- Syamsiyah , S. (2014). Meningkatkan Kecerdasan Kinestetik Melalui Games Ball pada Anak Kelompok Bermain Masjid Syuhada [Skripsi]. Yogyakarta: Universitas Negeri Yogyakarta . Diperoleh 15 Desember 2019, dari eprints.uny.ac.id