9 (1) (2020) 34-39

Early Childhood Education Papers

https://journal.unnes.ac.id/sju/index.php/belia

The Application of Taiso Radio Gymnastic in Improving Gross Motor Ability of Children Aged 5-6 Years

Resta Hardasari✉, **Diana Diana**

DOI: http://dx.doi.org/10.15294/belia.v9i1.30309

Department of Early Childhood Teacher Education, Universitas Negeri Semarang, Indonesia

History Article

Submitted 11 April 2020
Revised 13 May 2020
Accepted 4 June 2020

Keywords

Taiso Radio Gymnastics; Non-Locomotor Motion; Gross Motor of Children Aged 5-6 Years Old

Abstract

The objective of this study was to obtain the data on the improvement of gross motor ability of children aged 5-6 years with taiso radio gymnastics. This research was included in the experimental research type. The population in this study were children aged 5-6 years at RA Diponegoro Kertanegara, Purbalingga. The respondents in this study were 33 children. The method of data collection in this study was the observation instrument of gross motor ability of children aged 5-6 years. Then the method of data analysis used were descriptive and hypothesis testing with Paired Sample t-Test. The results of this study indicated that the gross motor ability of children aged 5-6 years after being given treatment which was in the form of Taiso Radio gymnastics from an average of 92.91 to an average of 106.48. This was given a pretest treatment of gross motor ability of children aged 5-6 years in the fair category with a percentage index of 12.12% and a good category with a percentage index of 87.88%. After being given treatment (posttest) there was an increase in gross motor ability of children aged 5-6 years into a good category with a percentage index of 81.81% and a very good category with an achievement index of 18.19%. Therefore, taiso radio exercise is effective in increasing gross motor ability of children aged 5-6 years. Based on the results of the Paired Sample t Test calculation, the researcher obtained values -ttable > tcount > ttable, which was (-14.544 < -2.036 or 14.544 > 2.036), with sig = 0,000, so that H_0 was rejected and H_1 was accepted. It meant that there were differences in the gross motor ability of children aged 5-6 years after being applied to Taiso Radio gymnastics. The difference can be seen from the value of sig 2 tailed <0.005 which was 0,000.

How to Cite

Hardasari, R., & Diana, D. (2020). The Application of Taiso Radio Gymnastic in Improving Gross Motor Ability of Children Aged 5-6 Years. *Early Childhood Education Papers*, 9(1), 34-39.

✉ Correspondence Author:
E-mail: restahardasari481@gmail.com

p-ISSN 2252-6382
e-ISSN 2686-3375

INTRODUCTION

Early childhood is a time when children love to move. When they are awake, most of the time is used to move, such as running, climbing, throwing, jumping, climbing stairs, hanging, drawing, and so on. From the entire life span, the most moving or high frequency activities is at the age of three. They look nervous (lots of moves) while watching television, while at the dinner table, even when they are sleeping, they also move. At the age of three, children enjoy their movements, such as jumping and dancing to and fro. At the age of four, children still enjoy doing the same activities, but they become more adventurous.

With high activity, preschoolers need to do sports that are appropriate for their age, dance, and other positive and beneficial activities. At the age of around five years, children are increasingly fond of the types of adventure activities and are more confident and brave to do scary scenes, such as climbing high, running fast, and like racing together with their peers (Soetjiningsih, 2012). The development of basic motor motion for children aged 4-6 years, is a sensitive period for children, children begin to be sensitive to accepting various efforts to develop all of their potential. Sensitive period is the period of maturation of physical and psychological functions that are ready to respond the stimulation given by the environment. Therefore, the basic development of motor movements for kindergarten children is important to involve a broad body part to be used in running, jumping, gymnastics, swimming, and so on.

According to Safitri (2008) gross motor ability are body movements which use large or most muscles or all body parts that are affected by the maturity of the child. Gross motor development is very important in early childhood. The development of the gross motor ability needed by kindergarten children has a lot of energy for all parts of the body to move and large muscles play a lot of roles in gross motor activity. Gross motor ability are closely related to movement. Early childhood must also practice the movements to be more coordinated and developing as expected. Early learning to improve children's gross motor ability is a movement that increases agility, balance, coordination, muscles, and other nerves. The development of early childhood movements will not develop if it is not properly studied. The right stimulus is needed in the learning movement used by young children who can develop gross motor ability well (Komputerisna, 2016: 2). Gross motor skill is one aspect that must be developed for children that is still a range of aspects of its development, this is due to children begin learning in starting a healthy and accustomed life in their daily lives. One aspect that can develop a child's gross motor ability is through rhythmic exercises, because through rhythmic exercises the children are more happy and cheerful in making movements. Besides being happy and cheerful, children are also enthusiastic in doing rhythmic exercises, although sometimes rhythmic exercises performed by children are not optimal due to the presence of some children who are still joking around with other friends. Rhythmic exercise in children is adjusted to the movement that will be carried out. The presence of musical accompaniment in children is one of the children's pleasures, so rhythmic exercise must be done in school so that the gross motor development of children develops in the presence of rhythmic gymnastics (Anggraini, 2016).

Not only Indonesia, Japan also has typical gymnastics or like physical fitness exercises. Taiso is Japanese which means gymnastics or can be interpreted as physical fitness. Taiso can be done in a corridor or a place that allows you to do taiso. Taiso music sounds like a soft piano, and always sounds every time before working hours at the same time because the music is set automatically. So anyone who hears Taiso music, people will automatically form groups, circles or front of back. In ancient times, this taiso music was only heard through Taiso's radio. Taiso has become a Japanese national tradition. From children to the elderly. Taiso is a National program that was first held by NHK radio in 1928. Taiso became very popular in Japan, namely after World War II and now it is still carried out among students. The tradition of Taiso Radio extends throughout Japan, from children to the elderly. The advantages of taiso radio gymnastics are suitable for all ages, when gymnastics are shorter than other gymnastics, the music used only comes from the piano, this exercise is quite simple so it does not use tools in gymnastic movements but rather the movement of the whole body, and because it does not use tools in its movements, the space used is not too wide (Aichi, 2013).

Indonesia's Ministry of Education and Culture Regulation No. 137 Year 2014 concerning the National Standards for Early Childhood Education which contains the Standard Content on Levels of Achievement of Child Development shows that the level of physical/motor development of children aged 5-6 years includes: (1) Performing body movements coordinated to train flexibility, balance and agility; (2) Coordinating

eye-hand-head movements in imitating dance or gymnastics; (4) Performing physical play with rules: (4) Using right and left hands well: (5) Carrying out personal hygiene activities.

Taiso radio gymnastics has a movement that is more often done by relying on one place and almost all movements are nonlocomotor movements such as Samsudin (2008) who argue that nonlocomotor in other terms is called stability ability, namely movements carried out by minimizing or not moving from its place or foundation. In other words, nonlocomotor movements can also be interpreted as movements carried out without or only very little movement from the support area. It can also be defined as movements carried out with movements that require the basics of support at all or movements that move. For example, bending the body, swinging the body, bending, etc.

METHOD

This research was experimental research type and the research design was One Group Pretest-Posttest Design. According to Arikunto (2010) one grup pre-test post-test research is research which is carried out in one group without a comparison group. In this design, before being given a treatment, subject is given pre-test first. A pre-test is conducted to find out the initial abilities of the subject. After being given a pre-test, then the subject is given treatment with the design of the activities that have been designed. At the last stage, a post-test is given to determine whether there is a change in behavior on the subject after being given treatment. The population in this study were students at RA Diponegoro aged 5-6 years (class B) which were 33 children. The sample in this study was the total population. Data collection techniques in this study were tests (pre-test and post-test), field observations, and documentation. This study used 34 valid instrument items that have been tested. Data analysis in this study included the normality test and hypothesis testing in this study used the Paired Sample t-Test.

RESULTS AND DISCUSSION

The researcher divided the gross motor ability of children aged 5-6 years into 4 categories. The following parameters are gross motor ability of children aged 5-6 years.

Based on the pretest results, the data shows that before being given the treatment, there were 4 respondents with gross motor ability of children aged 5-6 years on the fair criteria (12.12%) and there were 29 respondents with gross motor ability of children aged 5-6 years on the good criteria (87.88%).

Table 1. Pretest Parameters of Gross Motor Ability for Children Aged 5-6 Years

Score Interval	Criteria	Frequency	Percentage
110 – 136	Very Good	0	0
83 – 109	Good	29	87.88
56 – 82	Fair	4	12.12
29 – 55	Poor	0	0
Total		33	100

Then after being given the treatment 12 times, the data obtained were 27 respondents with gross motor abilities of children aged 5-6 years on the good criteria (81.81%) and 6 respondents with gross motor abilities of children aged 5-6 years on good criteria which was equal to 87.88 %. This means that the treatment given by researchers can improve the gross motor ability of children aged 5-6 years with the results in Table 2.

Table 2. Posttest Parameters of Gross Motor Ability for Children Aged 5-6 Years

Score Interval	Criteria	Frequency	Percentage
110 – 136	Very Good	6	18.19
83 – 109	Good	27	81.81
56 – 82	Fair	0	0
29 – 55	Poor	0	0
Total		33	100

Based on the posttest data, the Paired Sample t-Test can be done to determine whether there is an increase in gross motor ability of children aged 5-6 years by doing taiso radio gymnastics. In this calculation, the researcher used the SPSS 16.0 program. The results of the t-Test test can be seen in Table 3.

Based on the results of the Paired Sample t-Test table, it can be seen that the sig (2-tailed) value is 0,000 where it is <0,005. t_{count} value in the table above was -14.544. So, based on the results of the calculation of the t test, value obtained were ($_{count}$ < -$_{table}$ atau $_{count}$ > $_{table}$), that was (-14.544 < -2.036 or 14.544 > 2.036), with sig = 0.000, so was rejected and was accepted. It means that there was a significant difference in the gross motor ability of children aged 5-6 years after applying

Taiso Radio gymnastics. Significant differences can be seen from the value of sig 2 tailed <0.05 which was 0,000.

Table 3. Paired Sample t-Test Calculation Result Paired Samples Test

	T	Sig. (2-tailed)
Pair 1 pretest-posttest	-14.544	.000

The gross motor improvement of children aged 5-6 years with taiso radio gymnastics can also be seen based on the percentage increase in the score, namely the increase in the category of the scores from pretest to posttest. The gross motor improvement of children aged 5-6 years with taiso radio gymnastics can be seen in Table 4.

Based on the results of the Table 4, it was known that before being treated, the gross motor ability of children aged 5-6 years was on average in the good category with a percentage index of 87.88%. After being given treatment, an increase in the average category of gross motor ability of children aged 5-6 years became a good category with a percentage index of 81.81%. When viewed on an average, there was no increase even the result of the good category from the pretest to the posttest decreased. However, if viewed from table 2, it showed the pretest that there was a result in fair category as many as 4 children with a percentage of 12.12%, while in posttest there was no result that show fair category and an increase in the very good category of 6 children with a percentage of 18.19%. Therefore, taiso radio gymnastics was effective in increasing gross motor ability of children aged 5-6 years.

Besides that, it can also be seen from the average obtained before and after the application of Taiso Radio gymnastics. In this study, the researcher also obtained data on the average value of gross motor ability of children aged 5-6 years before and after the application of Taiso Radio gymnastics as follows in Table 5.

Based on the Table 5, it can be seen that the average increase in gross motor ability of children aged 5-6 years before and after the application of Taiso Radio gymnastic increased from 92.91 to 106.48, resulting an increase in scores of 13.57. The conclusion that can be drawn was that the gross motor ability of children aged 5-6 years after being applied were increasing and there were some changes.

In line with Hurlock (2013), that children are very suitable or ideal for learning motors for some reasons: 1) The child's body is far more flexible than teenagers especially adults, 2) Children do not have many skills that clash with the new skills learned, 3. Overall children are more brave when they are younger than they are big, almost every child has the desire to try without having to imagine what will happen afterwards, 4. When teenagers and adults feel bored with repetition, on the contrary children really like repetitions. Children are willing to repeat an action many times so it trained muscle patterns do effectively, 5. Children have smaller responsibilities and obligations, children have plenty of time to learn and to master.

Before being given treatment, the researcher gave pretest first to determine the initial level of the respondents' gross motor ability. Some data were obtained after the pretest. Before being given treatment, there were 4 respondents with gross motor ability of children aged 5-6 years on the fair criteria (12.12%) and there were 29 respondents with gross motor ability of children aged 5-6 years on good criteria (87.88%). Of course there are many factors that influence the gross motor ability of children aged 5-6 years. According to Kartono (Andayani, 2012) who

Table 4. Recapitulation of Pretest-Posttest Calculation Results of Gross Motor Ability for Children Aged 5-6 Years

Score Interval	Pretest		Posttest	
	Frequency	Percentage	Frequency	Percentage
110 – 136 (Very Good)	0	0	6	18.19
83 – 109 (Good)	29	87.88	27	81.81
56 – 82 (Fair)	4	12.12	0	0
29 – 55 (Poor)	0	0	0	0

Table 5. Mean Result of Hypothesis Testing Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	92.91	33	4.141	.721
	Posttest	106.48	33	5.124	.892

stated that the factors that influence children's motor development are as follows: a. Factor of heredity (inheritance from birth or congenital), b. Environmental factors that are beneficial or detrimental to organic function maturity and psychological function, c. Child activities as free subjects who are willing, capable, have emotions and have an effort to build themselves. Endang and Nur (Andayani, 2012) also argued that the factors that influence the high and low quality of child development are determined by: a. Internal factors are factors that originate from individuals which include character, psychological, potential, enthusiasm for learning and special abilities, b. External factor is a factor that comes from the outside environment of individuals, both in the form of health, peers, and the environment.

The posttest activity was carried out after the researcher gave the treatment. The data obtained were 27 respondents with gross motor ability of children aged 5-6 years on the good criteria (81.81%) and 6 respondents with gross motor ability of children aged 5-6 years on the good criteria (87.88%). This meant that 12 treatments given by researchers can improve gross motor ability of children aged 5-6 years. In accordance with this, according to Hurlock (2013) stated that a skill that is well studied will develop into habits and stimulation that is appropriate to the stage of development of children from the surrounding adults will greatly help children to be able to achieve an optimal gross motor ability.

Takenoshita (Shimizu, 2015) which has been translated into Indonesian that the purpose of Taiso is to provide balanced growth for school children, enabling them to maintain health and have a cheerful and strong spirit, and also to provide a habit of obeying the rules. After the treatment was given based on the calculation of the difference in Paired Sample t-Test in the SPSS program, the t-Test results obtained values $-_{table} > _{count} > _{table}$, which was (-2.036 > -14.544 or 14.544 > 2.036), with the significant value (2 tailed) was 0 = 0.000. It proved that there were some differences in the gross motor ability of children aged 5-6 years after the application of Taiso Radio gymnastic. The mean results of gross motor abilities of children aged 5-6 years before and after the application of Taiso Radio gymnastics activities were differences in the mean scores, the pretest obtained 92.91, and after the treatment it was 106.48. Then the results were obtained that with the giving of Taiso Radio gymnastic activities, the gross motor ability of children aged 5-6 years were increasing. These results are in line with Wijayanti (2014) motor development is the progress of movement growth as well as the maturity of motion needed for a child to carry out a skill. In each age period the child's skills will increase, the older they become more skilled.

CONCLUSION

Based on the results of the study, it was concluded that the gross motor ability of children aged 5-6 years after being given treatment, namely in the form of Taiso Radio gymnastics, increased. It was known that before being given treatment (pretest) the gross motor ability of children aged 5-6 years was in the fair category with a percentage index of 12.12% and a good category with a percentage index of 87.88%. After being given treatment (posttest) there was an increase in gross motor ability of children aged 5-6 years into a good category with a percentage index of 81.81% and a very good category with an achievement index of 18.19%. Therefore, radio taiso exercise is effective in increasing gross motor ability of children aged 5-6 years.

REFERENCES

Andriyani, F. (2012). *Dr. Olahraga Menjelaskan senam Lantai*. Jakarta: Balai Pustaka.

Anggraini, F. (2016). Peranan Senam Irama terhadap Perkembangan Motorik Kasar Anak Usia Dini. *Jurnal Usia Dini*, 4(2), 3-8

Arikunto, S. (2010). *Prosedur Penelitian: Suatu Pendekatan Praktik.* Jakarta: Rineka Cipta.

Decaprio, R. (2013). *Aplikasi Teori Pembelajaran Motorik di Sekolah*. Yogyakarta: Diva Press.

Hurlock, E. (1978). *Perkembangan Anak.* Jakarta: Erlangga.

Komputerisna, A. A., & Diana. (2016). Gross Motor Ability of The Children's Group a Judging from Demonstration Method of Motion and Song in Kindergarten Pertiwi Nusa Indah. *Early Chilhood Education Paper*, 5(1), 1-8.

Nisnayeni. (2011). Peningkatan Perkembangan Motorik Kasar Anak melalui Senam irama di Taman Kanak-kanak Bina Ummat Pesisir Selatan. *Jurnal Ilmiah Pesona PAUD*, 1(1), 1-7.

Nursih, B. (2014). *Meningkatkan Kemampuan Motorik Kasar Anak melalui Permainan Sunda Manda pada Kelompok B1 TK Arum Puspita*. Skripsi. Universitas Negeri Yogyakarta.

Safitri, N., & Nugroho, R. A. A. E. (2017). Stimulation Dance Creations Art On Gross Motor Development Children Aged 5-6 Years in Islamic Al-Huda TK Semarang. *Indonesian Journal of Early Childhood Education Studies*, 6(1), 39-42.

Shimizu, S. (2015). *Cultural Struggles on the Body in Japan and Asia: When should we use 'modern' or traditional' body techniques?*

Soetjiningsih, C. H. (2012). *Perkembangan Anak Sejak*

Pembuahan Sampai dengan Kanak-kanak Akhir. Jakarta: Prenada.

Wijayanti, H. (2014). *Peningkatan Kemampuan Motorik Kasar Anak melalui Bermain Tangkap Bola Besar Kelompok B TK Al Hidayah Semawung Banjaroyo Kalibawang Kulonprogo*. Skripsi. Universitas Negeri Yogyakarta.