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TRADITIONAL GAMES REVISITED: A NEW PERSPECTIVE ON GROSS MOTOR DEVELOPMENT IN 5-6 YEAR OLDS

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Abstrak: *Penelitian ini bertujuan untuk mengetahui pengaruh modifikasi permainan tradisional terhadap perkembangan motorik kasar anak usia 5-6 tahun. Penelitian ini merupakan jenis penelitian kuantitatif menggunakan metode pre-experimental dengan desain one group pretest-posttest. Sampel dalam penelitian ini berjumlah 16 anak yang berusia 5-6 tahun. Teknik pengambilan sampel menggunakan purposive sampling. Teknik pengumpulan data yang digunakan dalam penelitian ini yaitu observasi dan dokumentasi. Observasi yang dilakukan menggunakan lembar observasi yang telah diuji validitas dan dinyatakan semua indikatornya valid, kemudian uji reliabilitas menggunakan rumus alpha Cronbach dan dinyatakan reliabel dengan nilai reliabilitas variabel X sebesar 0.777 dan nilai reliabilitas variabel Y sebesar 0.885. Hasil penelitian menunjukkan rata-rata skor N-Gain sebesar 0,43 yang berarti bahwa pengaruh modifikasi permainan tradisional terhadap perkembangan motorik kasar anak berada pada kategori sedang. Kemudian, hasil pengujian menggunakan uji regresi linier sederhana mendapatkan nilai signifikansi sebesar 0.001 kurang dari 0.05 (0.001<0.05), hal ini membuktikan bahwa terdapat pengaruh antara modifikasi permainan tradisional terhadap perkembangan motorik kasar anak usia 5-6 tahun.*
Kata kunci: *modifikasi permainan tradisional; motorik kasar; anak usia dini*

Abstract: This research aims to determine the effect of modifications to traditional games on the gross motor development of children aged 5-6 years. This research is a type of quantitative research using pre-experimental methods with a one-group pretest-post-test design. The sample in this study consisted of 16 children aged 5-6 years. The sampling technique uses purposive sampling. The data collection techniques used in this research are observation and documentation. Observations were carried out using an observation sheet tested for validity, and all indicators were stated as valid. Then, the reliability using Cronbach's alpha formula was declared reliable with a reliability value for variable X of 0.777, and the reliability of variable Y is 0.885. The research results show that the average N-Gain score is 0.43, meaning that traditional game modifications influence children's gross motor development in the medium category. Then, the test results using a simple linear regression test obtained a significance value of 0.001 less than 0.05 (0.001<0.05); this proves that there is an influence between traditional game modifications on the gross motor development of children aged 5-6 years.
Keywords: modification of traditional games; gross motor skills; early childhood

INTRODUCTION

Education is essential to human life, from the lowest to the highest. Education must be provided early so that children are ready to continue to the next level. Early childhood education is an essential educational vehicle for children so that growth and development are achieved in an optimal directional manner with stimuli and stimuli that are by the child's needs so that the stimulus given to the child will affect the growth and development of the child. One aspect of development that is quite important is gross motor development. Gross motor development is a movement that involves large muscles, including walking, running, jumping, swinging, throwing, catching, kicking, and coordination movements.

Gross motor development of children aged 5-6 years, according to Purwanto et al. (2024), based on developmental achievement indicators, children can perform various coordinated movements in a controlled, balanced, and agile manner. Furthermore, children can perform eye, hand, foot, and head movements in a coordinated manner in imitating various movements. Melinda Puspita Sari Jaya et al. (2023) stated that the parameters of children aged 5-6 years' gross motor development are classified into strength, balance, agility, flexibility, and coordination.

Gross motor skills in early childhood are essential to be developed; in line with this, the research by Dacholfany et al. (2024) discussed the improvement of children's gross motor skills through circuit games; in this study, children's gross motor skills are still weak, shown by some children not being able to jump, some children not being able to dash and balanced, some children not being able to throw in a directional way, Some children have not been able to kick on target, and the results obtained related to the average level of achievement of child development have increased.

In line with this, the research of Novia et al. (2024), which discusses efforts to improve children's gross motor skills through traditional games of the ankle, this study shows that efforts to improve children's body balance abilities have been carried out through various games. However, most of them are not creative, and games do not stimulate the balance of the child's body; this can be seen when playing walk boards; many children still have difficulty regulating their body balance. The results of the study showed that there was an improvement in children's gross motor skills through traditional games.

Furthermore, research conducted by Nasar et al. (2024) which discusses improving gross motor skills of children aged 5-6 years through modified Sundanese traditional games, this study shows that children's gross motor skills at the age of 5-6 years are not optimal in jumping skills, most children still cannot jump with two balanced legs without falling and cannot jump with one balanced leg without falling, The balance that children have is still lacking, and children lack

confidence to jump above height and are still hesitant to do so. The results of the study showed that the Sundanese manda game was able to improve children's gross motor development.

Some of the exposure to the results of the study was strengthened by the research of Purwanto & Rosyidin (2024), which discussed traditional games to improve children's gross motor skills in a study with a total of 30 children only showed the results of around 17.67% of children who were able to participate in physical games with rules such as running through cardboard arrangements, walking over walkways, and jumping through puzzle arrangements, this means that there are still 82.33% of children who are not able to play physical games with rules. This can be seen when jumping over the puzzle arrangement. The child hesitates when jumping over it, and also, the child has difficulty managing the balance of his body; the child is not agile, often falls and crashes when doing activities, and the child's reflexes are not fast.

In line with this, Purwanto's (2023) research discusses the influence of traditional games on children's gross motor skills. In this study, the results of research on children's gross motor skills are still lacking; it can be seen that children do not seem to control the movements of the limbs or have not been able to coordinate the limbs so that they can be skilled due to the lack of physical exercises such as running, jumping, walking forward and backward with heels, kicking the ball or doing ankle games. The research results show that traditional games influence early childhood gross motor development.

Some of the results of this research are strengthened by research conducted by Abdullah in Umar et al. (2023), which concluded that "traditional games may contribute a great and significant effect towards the development of subjects gross motor, analysis results clearly support with significant evidence that the traditional games may lead to a great effect in improving the development of gross motor skills". The explanation is that traditional games can significantly affect the development of gross motor subjects. The results of the analysis support with significant evidence that traditional games can have a great effect on improving the development of gross motor skill levels.

Various types of research on traditional games and child development have yielded varied results. Moreover, preliminary research results in the field can strengthen the reason for using traditional games to support children's development. Judging from the existing problems, this study aims to determine the influence of traditional game modification on the gross motor development of children aged 5-6 years at Kartika II/27 Bandar Lampung Kindergarten.

This research is different from several previous studies because of the many types of traditional games; the author wants to present a traditional game with the latest version by modifying it with various activities and tools. Modified traditional games include global Sodor,

English, and Fortress games (Nasar et al., 2023). Modification of the traditional match can be given in the form of additional rules of play, the use of tools, or also by adding excitement to the game, such as running, jumping, and cooperation (Afini et al., 2023; Purwanto et al., 2023).

Modifications to the traditional game of global Sodor are carried out by adding a game tool, namely a ball carried by the player into the field by being thrown from outside the field, then the player on guard tries to block and snatch the ball from the player (Nuswantoro et al., 2023; Purwanto, 2023a). Modifying traditional games is one option for introducing more modern national games to children. The modified global Sodor game is a global Sodor game that has been changed or added to the stages and ways of playing to adapt to children's needs and gross motor development (Lubaba & Rohita, 2014).

The next game modifies the traditional Engklek game by adding zig-zag running activities before entering the Engklek field. According to Malichah and Rakhmawati (2018), the modified English game is a fun learning method that a teacher can use to introduce geometric shapes. Game activities carried out by jumping with one foot on a field in the shape of several squares can be used to develop aspects of child development.

The third game modifies the fortress game by adding a playing tool, namely a ball. The ball is used to kill the opponent by throwing the ball at the opponent's body or fort. Applying this traditional game modification is expected to improve the gross motor development of children aged 5-6 years. The increase in children's gross motor development will undoubtedly affect the smooth development of other aspects. Through this activity, it is hoped that children can get to know traditional games better with their various imaginations, be more enthusiastic about doing games, and learn more traditional games.

METHODOLOGY

This study uses a quantitative approach, and data processing is carried out using statistical methods. The type of research used in this study is *pre-experimental design, one group pretest-posttest*. This study was conducted to find out and analyze independent variables and seek information about the influence of traditional game modifications on the motor development of children aged 5-6 years. The population in this study is 33 children, while the sample is 16 children. The data collection techniques used in this research are documentation and observation. The data collection tool uses observation sheets that have been tested and declared valid, and the data analysis technique uses *the N-Gain* test and a simple linear regression test.

RESULT AND DISCUSSION

Result

This research is an experimental research conducted in 6 meetings. The theme used in this study is traditional games with three types of games, each carried out for two meetings. This study involves three observers and the researcher who helps implement the learning process in the classroom. The assessment rubric used is equipped with aspects that children must achieve. The learning activities designed in this study aim to determine the effect of traditional game modifications on the gross motor development of children aged 5-6 years. The following is an explanation of the activities carried out in this study.

The first activity was *a three-day pretest* activity, which involved doing a jump rope game in groups, throwing and catching the ball with friends, and kicking the ball. The treatment activities at the first meeting were to modify the global Sodor game, the second meeting to modify the English match, and the third meeting to alter the fort game. The fourth, fifth, and sixth meetings modified the game of fortifications, global Sodor, and ankle. The next activity is *a* three-day posttest: playing group games, jumping over ropes, running zig-zags by carrying the ball, and dividing groups to play cooperative activities with consecutive balls.

After the pretest, *treatment, and* posttest *activities are carried out,* the research data will be processed. This study's *pretest* and *posttest* data were used to measure the effectiveness of learning using traditional game modifications. Meanwhile, the treatment data in this study was used to see how much influence traditional game modification activities had on children's gross motor development through the analysis of a simple linear regression hypothesis test. Based on the research that has been carried out, the results of *the pretest* were obtained for the number of samples of 16 students, namely a minimum score of 17, a maximum score of 25, and an average of 21. Meanwhile, *the posttest results* for 16 students in the sample had a minimum score of 25, a maximum score of 39, and an average of 31. This shows that there is a difference in scores between *the pretest* and *posttest* that has been carried out, which can be seen in the following frequency distribution table.

Table 1. Pretest Frequency Distribution

No.	Category	Interval	Frequency	Percentage (%)
1.	BSB	≥23	4	25
2.	BSH	21-22	4	25

3.	MB	19-20	7	43.75
4.	BB	17-18	1	6.25
		Total	16	100

Source: Research Data, 2024

Based on the data contained in the *pretest frequency distribution table,* it is known that children in the undeveloped category (BB) range amount to 1 person with a percentage of 6.25%. Children in the starting to develop (MB) category amounted to 7 people with a rate of 43.75%. Children in the category of developing according to expectations (BSH) amounted to 4 people with a rate of 25%. Moreover, children in the very well-developed category (BSB) amounted to 4 people with a rate of 25%.

Table 2. Posttest Frequency Distribution

No.	Category	Interval	Frequency	Percentage (%)
1.	BSB	≥34	2	12.5
2.	BSH	31-33	7	43.75
3.	MB	28-30	5	31.25
4.	BB	25-27	2	12.5
	Jumlah		16	100

Source: Research Data, 2024

Based on the data contained in the *posttest* frequency distribution table, it is known that the number of children in the undeveloped category (BB) range is two people with a percentage of 12.5%. Children in the range of beginning to develop (MB) amounted to 5 people with a rate of 31.25%. Children in the expected development range (BSH) amounted to 7 people, with a percentage of 43.74%. Children in the healthy development range (BSB) amounted to 2 people with a rate of 12.5%.

The data obtained from the *pretest-posttest results* will then be analyzed using *N-Gain* to determine the magnitude of the influence on the child's gross motor development after treatment. The calculation *of N-Gain* in this study uses the help of the IBM SPSS *Statistics* 25 program and produces an average *N-Gain* score for 16 samples, which is 0.43. Based on the test results, the average obtained is 0.43, meaning the results are in **the medium** category. After the *N-Gain* value is found, the next step is to conduct a simple linear regression test analysis to see if traditional game modification games affect gross motor development in children. The simple linear regression test in this study was carried out with the help of the IBM SPSS *Statistics* 25 program, with the decision-making criteria declared significant if the value of Sig<0.05 was determined. The summary of the linear regression test analysis results is as follows.

Table 3. Posttest Frequency Distribution

Model	*Sum of Square*	*Df*	*Mean Square*	*F*	*Sig.*
Regression	2.128	1	2.128	15.909	.001[b]

Source: Research Data, 2024

Based on the table of the results of simple linear regression analysis, a significance value of 0.001 was obtained less than 0.05 (0.001<0.05), so it can be concluded that there is an influence between traditional game modification and the gross motor development of children aged 5-6 years. This is seen based on the decision-making criteria of a simple linear regression test, namely:

- If the significance value is <0.05, it means that variable X affects variable Y
- If the significance value is >0.05, it means that variable X does not affect variable Y

The magnitude of the influence given by the modification of traditional games on the gross motor development of children aged 5-6 years is explained in the following table.

Table 4. The Influence of Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.729[a]	.532	.498	.366

Source: Research Data, 2024

Based on the results in the table above, the determination coefficient (*R Square*) value is 0.532. If the percentage is 53.2%, it can be concluded that the influence of modifying traditional games on the gross motor development of children aged 5-6 years is 53.3%. Therefore, modifying conventional games affects the gross motor development of children aged 5-6 years.

Discussion

Based on the results of this study, there is a difference in the *pretest* and *posttest* scores from the average results. The value was then tested using *the N-Gain* formula, and the product was produced in the saving category. The score in the medium category was caused by the treatment in the experimental class, which was only carried out six times through the provision of modified games of traditional games of global Sodor, ankle, and fort. If the treatment is carried out for a longer duration with more types of games and varied modifications, the possibility of the score obtained will also be higher. This is evidenced by the enthusiastic children when invited to play traditional game modifications, but at the end of the meeting, the children have memorized and understood this game so that it is played with a longer duration of treatment; it is feared that the child will feel bored.

Children carry out the learning process through playing traditional games in this study by

utilizing the child's gross motor development, namely balance, strength, and coordination of the eyes, hands, and feet, as well as cooperation. The global Sodor game utilizes the legs' strengths when running to avoid opponents and hand muscles to throw and grab the ball (Purwanto, Umar, et al., 2024; Taufiqi & Purwanto, 2024). Train the ability to balance when avoiding the opponent's touch and changing places, as well as coordinate the eyes, hands, and feet to defend the ball. The ability to cooperate in teams/groups when playing is also essential to victory in the global Sodor game. According to Ketty (2020), gobak sodor is a game played by two squads of 3-5 people who need running speed, cooperation, and strategy to achieve victory.

The following learning process is with the traditional game of English. The traditional game of English can be used to improve children's gross motor development. This is because the game of Engklek contains several movements or activities that involve the ability of the child's large muscles, such as jumping with one leg, running in a zig-zag manner, and balancing the body when lifting one leg, and throwing back on the box. In line with this opinion, according to Darmawati and Widyasari (2022), learning by applying ankle games is beneficial for early childhood gross motor skills, where they become more active, disciplined, and able to cooperate with their friends.

The following learning process is the traditional game of forts. The traditional game of fortifications is a team game that is carried out with a ball and a chair as a defensive fortress. This game can stimulate children's gross motor skills, such as throwing the ball right at the target, running to avoid throwing the ball and defending the fortress. In line with this, according to Khafidoh & Maulida (2021), children's gross motor skills are very developed; this is shown by the assessment of children's gross motor abilities after participating in learning the fort game. Fortress games can develop gross motor skills in early childhood.

This child's gross motor development occurs when the child performs movements that can affect the movements of his enormous muscles. In traditional game activities, almost all children's activities use considerable muscle abilities such as running, jumping, standing, throwing, and others. According to Tangse & Dimyati (2022), children's gross motor skills will improve if the stimulation provided is also appropriate. Using modified traditional games can facilitate learning and support children's gross motor development.

The research results by Maryati et al. (2023) stated that traditional fortification and jumping rope games significantly influence children's gross motor skills. In line with this, Humairah and Sitorus (2023) stated that conventional games significantly and positively affect the development of integrated gross motor skills of PAUD students. Traditional games that have been modified can add new enthusiasm for children to play, using tools as an addition and unique and fun steps that

can add to children's confidence for playing. Based on the description of the research results and discussion above, traditional game modification influences the gross motor development of children aged 5-6 years.

CONCLUSION

The study's results showed an effect on gross motor skills in children aged 5-6 years after treatment. The data obtained before the treatment was that 25% of children who developed according to expectations increased to 43.75% after the treatment. The results obtained in the *N-Gain* test are 0.43 or 43%, so the results can be classified in the medium category, namely the *N-Gain* value of $0.3 \leq g \leq 0.7$. The correlation value (R) is 0.729. From this *output*, the coefficient of determination (R Square) was obtained at 0.532, which implies that the influence of the free variable (modification of the traditional game) on the bound variable (gross motor development) is 53.2%. Based on the results of the research that has been carried out and based on data processing, it can be concluded that traditional game modifications affect the gross motor development of children aged 5-6 years.

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