



# The traditional game of TAPA GALA as a method to improve gross motor skills

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**Abstract:** Gross motor skills are essential for supporting the physical development of primary school-aged children; however, the increasing use of digital devices reduces their engagement in traditional physical activities. The purpose of this study is to test the effectiveness of the traditional Tapa Gala game in improving the gross motor skills of fourth-grade students at SDN 2 Tawali Wera. This study uses a quasi-experimental method with a one-group pre-test and post-test design, involving 12 students aged 9–10 years. The Tapa Gala Gross Motor Test (TMK-TG) includes four subtests: Zigzag Running, Standing Long Jump, Chasing Running, and Imitating Movement. The data were analyzed using paired t-tests to determine significant differences between the pre-test and post-test scores. The results showed a significant improvement in gross motor skills following the intervention, with an average pre-test score of 40.25 and a post-test score of 50.42 ( $p = 0.000$ ;  $p < 0.05$ ). Based on the classification, 25% of students were in the “Very Good” category, 67% in the “Good” category, and 8% in the “Sufficient” category. These results indicate that the traditional Tapa Gala game can be effectively implemented as a contextualized, enjoyable, and culturally rich physical learning method to support children’s gross motor development. This study provides further evidence that games based on local wisdom can serve as an alternative learning strategy to support students’ physical competence while preserving traditional games within modern education.

**Keywords:** gross motor; traditional games; Tapa Gala

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## **INTRODUCTION**

The development of gross motor skills in primary school-aged children is one of the key aspects of their overall growth and development (Darmawan et al., 2024). Gross motor skills relate to a child's ability to move the large muscles of the body, such as those in the arms, legs, and torso (Saripudin, 2019). These skills play an important role in various physical activities, including running, jumping, climbing, throwing, and catching. Traditional games, such as Tapa Gala, can help enhance gross motor skills. They offer many benefits for children, especially by providing enjoyable opportunities to practice physical skills (Amar et al., 2023). One example is Tapa Gala, a tag-like chasing game that is popular in many regions across Indonesia (Argubi et al., 2020). In this game, children run and dodge the chaser, which directly trains their motor skills (Yamin et al., 2022). However, children's interest in traditional games has been declining due to the rapid growth of digital technology. Today, many children spend more time on electronic devices, such as smartphones or tablets, instead of playing actively outdoors (Kamila & Hidayaturochman, 2022). This situation has led to a decrease in physical activity, which ultimately affects children's gross motor skills and overall development. Traditional games hold rich educational and physical value, especially in supporting the development of children's gross motor skills. Gross motor skills involve the use of large muscle groups in the legs, hands, and arms, as well as movements that require balance, coordination, and strength (Saputri et al., 2023). Through traditional games such as Tapa Gala, children not only learn about the local culture, but also get physical exercise that is beneficial for their growth (Tunnisa et al., 2025).

This is also proven through tests at the initial observation stage of 12 fourth grade students of SDN 2 Tawali Wera. The results of observations showed that the Coordination of the student's body, ranging from how to run, jump, to dodge when playing the traditional game of Tapa Gala, in general is still not good. Although some students seem to have a fairly good body coordination, the majority of students still seem to have difficulty adjusting gestures or gross motor skills when playing Tapa Gala. Based on the background of the problem, the researchers set the title of the study "traditional Tapa Gala game as a method to improve gross motor skills." This study aims to test and analyze the effect of traditional Tapa Gala game on improving gross motor skills of fourth grade students in SDN 2 Tawali Wera. In addition, this study is expected to provide theoretical contributions as an additional reference on the role of traditional games in children's gross motor development, as well as provide practical benefits

in the form of alternative learning methods that can be applied by teachers to improve gross motor skills of learners.

According to (Candra et al., 2023), gross motor is an ability that involves large muscle movements that play a role in physical activities such as running, jumping, and body balance. Optimal gross motor development is important in supporting the child's learning activities and everyday life. This is made clear by the opinion (Atqiya & Pratama, 2024), Gross motor skills are essential to support a child's physical and social development. These skills include the ability to use large muscles to perform various movements, such as walking, running, jumping, and climbing. Physical development and gross motor skills play a role in strengthening large muscles throughout the body. Activities that involve active physical movement can also improve a child's physical health, thus helping them grow stronger and healthier.

Tapa Gala traditional game is one form of game that comes from Indonesian culture, especially in Sumatra (Aminuddin et al., 2023). According to (Satriawan et al., 2023), *Tapa Gala* is a traditional game that involves a group of children and promotes physical skills such as running, jumping and hiding. In this game, the children are divided into two groups, where one group acts as a guard and the other group as a player. The player has the task to cross the predetermined limit without being caught by the guards. The game also involves various physical movements that are not only fun, but also serve to develop the child's motor, social and emotional skills. (Satriawan et al., 2023) explaining that Tapa Gala is a type of Chase game that not only strengthens the large muscles of the body, but also trains the child's agility, strategy and responsiveness to the surrounding environment. Active children play. Tapa Gala showed a significant improvement in gross motor skills compared to children who rarely engaged in physical activity.

## **MATERIAL AND METHODS**

This study uses a quantitative approach, which is an approach that emphasizes the collection and analysis of data in the form of numbers systematically (Ardiansyah et al., 2023). The method used is a quasi experiment, which is a research method that aims to determine the effect of certain treatments but does not use random assignment to the subject of research (Arib et al., 2024).

The research design applied is one group pre-test and post-test design. In this design, there is only one group of subjects to be treated. This group was first given an initial test (pre-test) to determine the initial condition of the students' gross motor skills. Furthermore, the subjects were given treatment in the form of the application of the traditional game Tapa Gala. After the treatment was completed, the subjects were again given a final test (post-test) to measure changes in gross motor skills. Participants are subjects who are deliberately selected and involved in a study to provide data or information relevant to the purpose of the study (Mulyana et al., 2024). In this study, participants were fourth grade students at SDN 2 Tawali Wera who acted as the object of treatment and measurement in order to determine the effect of the traditional game of Tapa Gala on gross motor skills. The number of participants was 12 people, consisting of male and female students with an age range of 9 to 10 years. The selection of participants was carried out using purposive sampling technique, which is a deliberate sampling technique based on certain criteria. The criteria include active involvement in physical learning as well as willingness to follow the entire range of treatments and measurements. Formal consent to involve participants is obtained from the school and parents / guardians of students to ensure that research is carried out in accordance with the principles of research ethics.

Protocol The instrument used in this study consists of four subtests, namely: (1) Zigzag running, which aims to measure coordination and balance. (2) Standing long jump, which is used to measure the strength of the leg muscles. (3) Chasing run, which serves to measure reaction, speed, coordination and agility. (4) Mimics the Tapa Gala movement, which is used to measure complex coordinative skills according to traditional game patterns. Each student took the initial test (pre-test) to determine the condition of gross motor skills before treatment, then given treatment in the form of Tapa Gala game exercises regularly in several sessions and then carried out the final test (post-test). Assessment of each subtest was carried out using a scale of 1-5 for each aspect measured. All instruments are prepared taking into account the characteristics of the child's age development and refer to the authentic assessment guide in physical education as stated by (Satriawan et al., 2023). Statistical Analysis The Data obtained were analyzed in a descriptive quantitative to see the average, standard deviation, and the percentage of each student's score. To determine the significant effect before and after treatment, paired t-test is used if the data is normally distributed. If not, use the Wilcoxon test. The total gross motor score is calculated from the combined score of all subtests (maximum 60

points), and categorized as follows: 51-60: Very Good, 41-50: good, 31-40: enough, 21-30: low,  $\leq 20$ : Very Less Data visualization is displayed in the form of bar charts and radar charts to see the distribution of strengths and weaknesses of each participant in gross motor aspects.

## RESULTS

This section, the authors present the results of research aimed at analyzing the effectiveness of the traditional game of Tapa Gala in improving gross motor skills of fourth grade students of SDN 2 Tawali Wera. Data collection was conducted through four subtests in the Tapa Gala gross motor test (TMK-TG), which included Zig-Zag running, standing long jump, pursuit running, and imitation of movement. The measurement results are presented in the form of tables, equipped with descriptive descriptions to explain the achievement scores and categories of gross motor skills of each participant.

### 1. Score Recapitulation Of Each Subtest

Table 1 presents the gross motor ability measurement scores of the four TMK-TG subtests for 12 students who participated in the study.

No	Child's Name	Zig-Zag	Jump	Pursuit	Imitates	Total Score	Categories
1	Anidiya Rahmadani	9	5	20	22	56	Very Good
2	M. Jifat	10	4	20	19	53	Very Good
3	Naufal Afka	6	4	18	23	51	Very Good
4	M. Raihan Almukmin	10	4	14	22	50	Good
5	Aditiya	4	2	18	24	48	Good
6	Aurel Tulmairah	6	5	16	21	48	Good
7	Abijal Dirga	10	3	11	24	48	Good
8	M. Alfin	8	4	14	21	47	Good
9	Feter Wiliam	7	3	14	23	47	Good
10	Alesa Nuha Zahira	7	4	18	17	46	Good
11	Imam dafa	8	1	12	20	41	Good
12	Fitriatun Aulia	6	5	11	14	36	Enough

### Chart 1. Recapitulation of Gala Tapa gross motor test score (TMK-TG)

## 2. Distribution Of Gross Motor Ability Categories

Based on Table 1, it is known that: 3 students (25%) entered the excellent category, 8 students (67%) entered the Good category, 1 student (8%) entered the sufficient category, There are no students who fall into the category of less or very less

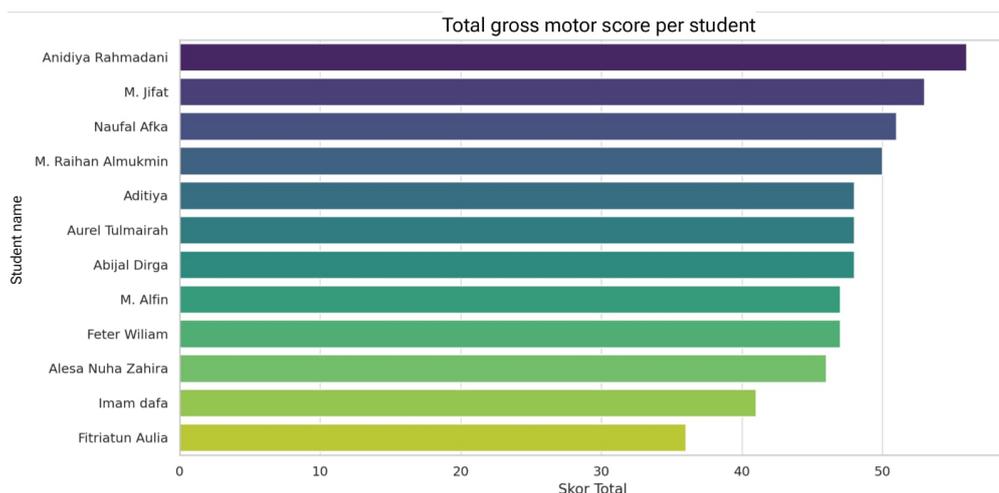


Figure 1. Total gross motor score of each student

## 3. Interpretation Per Subtest

Zig-Zag: average score of 7.33. Students with good coordination and balance achieved a score of 10, but there were also only 4. Long jump: average score of 3.42 out of 5. Students with high leg strength such as Aurel and Fitriatun showed a score of 5. Sprint pursuit: average 15.25. The reaction and speed aspects are dominant here, with a perfect score obtained by 2 students. Mimic movements: average 21.08 out of 25. This subtest showed students ' coordinative strength in following the game's complex movement patterns.

## 4. Uji Statistik

Variabel	N	Mean Pre-test	Mean Post-test	Mean Difference	t	Sig. (2-tailed)
Gross Motor Skills	12	40,25	50,42	10,17	6,421	0,000*

The results of statistical analysis using paired t-test showed that there is a significant difference between the pre-test and post-test gross motor skills of students after treatment in

the form of traditional Tapa Gala game. Significance value obtained  $p = 0.000$  ( $p < 0.05$ ), so it can be concluded that the treatment has a significant effect. The average pre-test score was in the range of 40, while the average post-test score increased to 50, with a mean difference of 10 points. This result is reinforced by the value of the effect size (ES) in the medium category, which shows that the Tapa Gala game has a significant impact on improving gross motor skills of students. This is in line with research conducted (Erdiana, 2016) that the game grobak sodor or Tapa gala effective in developing psychomotor child. Thus, statistically it can be concluded that the traditional Tapa Gala game is effectively used as a physical learning method to improve students' gross motor skills, especially in the aspects of coordination, muscle strength, reaction speed, and agility.

## **DISCUSSION**

The results showed that the traditional game of Tapa Gala has a positive and significant effect on improving gross motor skills of fourth grade students of SDN 2 Tawali Wera. This can be seen from the increase in scores on four aspects of the TMK-TG subtest, namely Zig-Zag running, standing long jump, chasing running, and imitating movement. A total of 92% of participants were in the “good” and “very good” categories, while another 8% were in the “sufficient” category. There were no participants in the category of “less” or “very less”. This shows that traditional game-based methods are well accepted and effective in the context of physical learning. The most notable increase occurred in the subtest imitating the Tapa Gala movement, with an average score of 21.08 out of a maximum of 25. This suggests that children are able to significantly develop coordination, agility, as well as balance through the activity of imitating complex movements in the game. Improvements also occurred in the chasing-running subtest (15.25 out of 20 on average), indicating progress in the child's speed and motor response. Meanwhile, the score of the Standing long jump subtest showed that although the child's leg muscle strength was quite good (average score of 3.42 out of 5), this aspect was still a relative weak point compared to other aspects, especially in participants such as Imam Dafa and Aditiya who showed low scores.

Analysis by final category showed that the students with the highest scores, such as Anidiya Rahmadani, M. Jifat, and Naufal Afka, showed good mastery in all aspects of gross motor. They have balance, quick reactions, and high body coordination, which is consistently seen in all subtests. These findings are in line with the opinion (Sewi & Mailasari, 2020) which states that

good gross motor skills reflect optimal synergy of coordination, balance, and muscle strength functions. In contrast, students with lower scores such as Fitriatun Aulia still experience obstacles in agility and accuracy of movement, despite having good leg strength (score 5 on the jump test)

Theoretically, these findings support the view (Asyari et al., 2024), which states that gross motor development is essential to support children's activities in general, including in learning and social contexts. In addition, these results are also in line with research conducted by (Mansyur et al., 2024), he concluded that the Tapa Gala game plays a role in training children's strength, agility, and body response in a fun and educational game environment.

## CONCLUSION

This study shows that the traditional game of Tapa Gala is effective in improving the gross motor skills of fourth grade students of SDN 2 Tawali Wera. This can be seen from the significant increase in scores on four main aspects tested, namely coordination of Motion, body balance, leg muscle strength, reaction speed, and agility. A total of 3 students (25%) were in the "very good" category, 8 students (67%) were in the "Good" category, and only 1 student (8%) was in the "sufficient" category, while none were in the "less" or "very less" category.

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