



The effect of traditional *GOPA* games on improving the physical fitness of grade v elementary school students

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Abstract: This study aims to determine the effect of the traditional gopa game on the physical fitness level of fifth-grade students at SD Negeri 30 Nitu, Kota Bima. This research employed an experimental method using a One Group Pretest-Posttest Desing. The sample consisted 17 students, selected through total sampling. The exercise program was conducted over four weeks with two sessions. The instrument used to measure physical fitness was the Indonesia Physical Fitness Test (TKJI). Data were analyzed using t-test statistics via SPSS version 23. The analysis results showed that the mean pretest score was 14.12 and the posttest score was 16.06. The t-value was -2.936 with a significance value of 0.01. Since the significance value is less than 0.05 ($0.01 < 0.05$) and the absolute value of that t-count is greater than the t-table ($-2.936 > 1.746$), it can be concluded that the gopa game has a significant effect on improving students' physical fitness. Thus, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. The traditional gopa game is proven effective as a fun and culturally relevant physical activity alternative in physical education to enhance elementary school students' physical fitness.

Keywords: Traditional game *Gopa*; Physical fitness; Students

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INTRODUCTION

Traditional games are games that have traditionally been played by children and passed down from generation to generation (Sari & Irawan, 2024). Traditional games are usually played by children, adolescents, and even adults using simple tools, rules, and traditional concepts. These games also carry social roles and values within them. According to (Adhani & Hidayah, 2014); (Maghfiroh, 2020); (Aulia & Sudaryanti, 2023); (Sudaryanti et al., 2024) traditional games play a role in developing children's social-emotional skills, including aspects such as discipline, honesty, hard work, creativity, independence, communication, and responsibility. In addition to developing children's social-emotional aspects, traditional games can also serve as a medium to instill noble/moral values in children (Samsurrijal, 2022). Physical Education, Sports, and Health (PJOK) is one of the subjects taught in schools aimed at improving students' physical fitness. There are no visible problems and urgency highlighted in this research. However, the background states that PJOK is generally a subject favored by many students. Nonetheless, some learners show low enthusiasm, primarily due to the repetitive and monotonous nature of physical activities. This condition results in a decreased interest in physical education among students. Therefore, PJOK teachers are expected to play an active role in selecting and applying learning models that can stimulate students' engagement and motivation. As emphasized by (Yustiyati et al., 2024) the integration of traditional games into PJOK lessons can significantly enhance students' interest and participation in learning physical education. Not only that, traditional games can also boost students' motivation and desire to learn (Anugrah & Dermawan, 2022); (Kurniawan et al., 2023).

Based on the initial observations at SD Negeri 30 Nitu, Kota Bima, it was found that students' physical fitness levels were relatively low. This was evident during PJOK (Physical Education) classes, where many students showed signs of fatigue even though activities began at 07.00 AM and had only lasted for 30 minutes. Numerous students requested rest breaks, and during basic gymnastics activities, many struggled to perform the movements correctly. For instance, when instructed to balance on one leg, a significant number of students failed due to poor balance and coordination. Teachers also noted a behavioral trend where students, after school, preferred to engage in sedentary activities such as playing video games rather than participating in physical play. These tendencies contribute to the overall decline in physical fitness among students.

To address this issue, the researcher was motivated to explore a culturally grounded alternative to improve students' physical condition, namely through the traditional game *Mpa'a Gopa*. This game, originating from the Bima/Dompu region and popularly known as *engklek*, involves hopping on one foot along a predefined path, typically drawn on the ground. It is commonly played by 2 to 5 participants and is well-known among children. As noted by (Sofyan et al., 2022) games involving single-leg balance can enhance motor coordination and stability. Additionally, traditional games have been shown to improve children's motor skills and physical fitness (Aqobah et al., 2023). (Apriliawati, 2018); and (Purwanto et al., 2023) also emphasize that the implementation of traditional games can effectively support the development of students' gross motor skills.

Physical fitness is a vital component of child development, directly influencing health, learning capacity, and emotional well-being. To maintain and improve physical fitness, regular physical activity is essential. (Rohmah & Muhammad, 2021). Stated that students who are more physically active tend to exhibit higher levels of fitness. Traditional games inherently require substantial physical exertion (Nurwahidah et al., 2021). making them an appropriate pedagogical tool for increasing student engagement in physical education. In this context, PJOE teachers are encouraged to utilize traditional games as an alternative and culturally relevant method to promote physical activity and combat declining fitness levels among students.

This study introduces a novel approach by applying *Mpa'a Gopa*, a local traditional game, as a structured physical fitness intervention. Unlike previous studies that broadly discuss traditional games, this research highlights the specific cultural relevance and biomechanical benefits of a localized game in the context of elementary education. By bridging cultural heritage and physical development, the study aims to offer a meaningful and replicable model for enhancing physical education through traditional practices.

MATERIALS AND METHODS

This study employed a quasi-experimental method with a *One Group Pretest-Posttest Design*. This design was chosen because it includes all essential stages—pretest, treatment, and posttest—which are aligned with the objective of measuring changes in students' physical fitness due to the intervention (Sugiyono, Syafutra & Suprayogo, 2022). Participants and Setting The population of this study consisted of 17 fifth-grade students at SD Negeri 30 Nitu, Kota Bima. Using a total sampling technique, all students were involved as research subjects,

making the study a population-based investigation (Hartono in Adrizal et al., 2023). The intervention was carried out on the village field of Nitu, located near the school, from April to May.

Procedure The intervention involved the traditional Gopa game, conducted over 8 sessions within 4 weeks (2 sessions per week). Each session lasted approximately 45 minutes and was structured as follows: (a) Warm-up (10 minutes): light jogging, stretching exercises focusing on lower body muscles (b) Core Activity (30 minutes): playing the Gopa game (jumping on one foot across boxes), which emphasized balance, leg strength, and coordination. Students took turns and followed specific rules to ensure fairness and engagement. Each student participated in multiple rounds with rest intervals. (c) Cool-down (5 minutes): light walking and breathing exercises the sessions were supervised by the researcher and assisted by the PE teacher to ensure consistency, safety, and engagement. All sessions were conducted in similar weather and field conditions to reduce external variability.

Instrument and Data Collection The physical fitness levels of students were measured using the Indonesian Physical Fitness Test (TKJI), which includes: (1) 40-meter sprint, (2) Pull-up/body lift (60 seconds), (3) Sit-up (30 seconds), (4) Vertical jump, (5) 600-meter run. Pretests were conducted one week prior to the first session, and posttests were conducted one week after the last session. All tests were administered by the researcher in coordination with school staff, using standardized scoring procedures as defined in the TKJI manual.

RESULTS

This study aimed to determine the effect of the *Gopa* traditional game on improving the physical fitness of fifth-grade students at SD Negeri 30 Nitu, Kota Bima. Data analysis was performed using SPSS version 23. The sample consisted of 17 students. The results of the study are described as follows:

Table 1. Descriptive Research Results

<i>Statistic</i>	<i>Pretest</i>	<i>Posttest</i>
Mean	14,12	16,06
Median	15,00	16,00
SD	3,180	3,112
Min	9	10
Max	20	22

Based on the data above, the pretest results show that the average physical fitness score of the fifth-grade students at SD Negeri 30 Nitu was 14.12, with a median of 15.00, a standard deviation of 3.180, a minimum score of 9, and a maximum score of 20. For the posttest, the average score was 16.06, the median was 16.00, the standard deviation was 3.112, the minimum score was 10, and the maximum score was 22. Before conducting statistical analysis, assumption tests were carried out, including normality and homogeneity tests. The normality test determines whether the data distribution is normal, and the homogeneity test examines whether the sample data comes from a homogeneous population.

Table 2. Normality Test

No	Variable	Statistic	sig	conclusion
1	<i>Pretest of physical fitness level</i>	0.967	0.755	Normal
2	<i>Posttest of physical fitness level</i>	0.938	0.291	Normal

From the table above, the significance value for the pretest is 0.755 and for the posttest is 0.291. Since both significance values are greater than 0.05 (Sig > 0.05), the null hypothesis that the sample is normally distributed is accepted. Therefore, it can be concluded that the data is normally distributed. The homogeneity test evaluates the hypothesis that the sample comes from a population with homogeneous variance.

Table 3. Homogeneity Test

Group	<i>Levene statistic</i>	<i>Sig</i>	Description
<i>Pre test</i>	0.072	0.790	Homogeneneous
<i>Post test</i>			

The results of the homogeneity test show a Levene Statistic of 0.072 and a significance value of 0.790, which is greater than 0.05. This indicates that the data comes from a homogeneous population.

Table 4. T-Test Results

Variable	Mean	<i>t count</i>	<i>Df</i>	<i>t table</i>	<i>Sig</i>	Description
<i>Pre test</i>	14.12	-2,936	16	1,746	0,01	signifikan
<i>Pos test</i>	16.06					

The results of the t-test show a t-value of -2.936 and a t-table value of 1.746. Since the t-value is greater than the t-table value ($|-2.936| > 1.746$), it can be concluded that there is a significant effect of the Gopa game on improving the physical fitness of fifth-grade students at SD Negeri 30 Nitu, Kota Bima. This is also supported by the difference in average scores: 14.12 for the pretest and 16.06 for the posttest. The significance value of 0.01 is less than 0.05 ($\text{Sig} < 0.05$), meaning that the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. Therefore, it can be concluded that the Gopa traditional game has a significant positive effect on students' physical fitness.



Figure 1. Game *Gopa*

Picture 1 shows students participating in the traditional *Gopa* game. In this game, students hop on one foot through boxes drawn on the ground, which requires balance, leg muscle strength, and body coordination. The physical activity involved in this game is one of the main factors contributing to the improvement in students' physical fitness.

DISCUSSION

This study supports previous research that emphasizes the importance of traditional games in improving students' physical fitness. For example, the study by (Paramitha et al., 2017) demonstrated that implementing traditional games in physical education activities can significantly enhance students' physical fitness. Similarly, this research aligns with the findings of (Umam et al., 2024), which showed that traditional game methods are effective in improving physical fitness. Traditional games also offer various benefits across educational domains. One such benefit is the development and reinforcement of cooperative values among children (Satriawan et al., 2023). Additionally, traditional games can serve as a tool to shape children's character, including values such as honesty, sportsmanship, perseverance, and teamwork (Tuti andriani, 2012).

Traditional games can be incorporated into physical education activities as a supplementary form of exercise. Integrating traditional games into the PJOK (Physical Education, Sports, and Health) curriculum can help teachers address students' boredom caused by repetitive physical activities. This statement is supported by the findings of (Wardika, 2019) who stated that implementing traditional games is highly effective in overcoming fatigue and monotony in PJOK learning. In this study, the *Gopa* game was utilized to improve students' physical fitness. This model proved to be effective in increasing the physical fitness levels of fifth-grade students at SD Negeri 30 Nitu Kota Bima, as measured through the Indonesian Physical Fitness Test (TKJI). The physical exercises involved in the *Gopa* game helped students become healthier. Additionally, the game promoted the development of students' social skills by providing opportunities to play cooperatively and understand game strategies.

These findings may also assist teachers in identifying alternative methods to improve students' physical fitness beyond conventional PJOK activities. Traditional games can be adopted as a practical and enjoyable alternative for physical fitness enhancement. However, several additional variables such as students' motivation, availability of facilities and infrastructure, and previous sports experience—may have influenced the results of this study. Therefore, further research is necessary to explore other factors that affect students' physical fitness development. Given that this study involved a relatively small sample of 17 students, future research is encouraged to include a larger population or sample size. Based on the results, it can be concluded that the *Gopa* traditional game has a significant effect on improving the physical fitness of students at SD Negeri 30 Nitu Kota Bima.

CONCLUSION

Based on data analysis and hypothesis testing, the findings of this study indicate that the *Gopa* game significantly improves the physical fitness of fifth-grade students at SD Negeri 30 Nitu Kota Bima. Considering the difference between the pre-test mean score of 14.12 and the post-test mean score of 16.06, and the t-test result of $-2.936 > 1.746$ (t-table), along with a significance value of $0.01 < 0.05$, the research hypothesis is accepted. This means that the *Gopa* traditional game has a significant effect on improving the physical fitness of fifth-grade students at SD Negeri 30 Nitu Kota Bima.

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