

The Effect of a Traditional Game Approach on Learning Motivation in Physical Education among Fifth-Grade Students at SDN 1 Runggu

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Abstract

This study examined changes in learning motivation among fifth-grade students following physical education lessons incorporating traditional games. A one-group pretest–posttest design was used with 20 purposively selected students at SDN 1 Runggu. Motivation was assessed using a Likert-scale questionnaire covering perseverance, interest, attention, and active participation. Pretest and posttest scores were compared using a paired-samples t-test. The mean score increased from 62.5 to 78.9. The reported paired-samples test indicated a statistically significant difference, $t(19) = -14.07$, $p < .001$. Traditional games were associated with higher motivation scores in this class. Because the study did not include a comparison group, the improvement cannot be attributed exclusively to the intervention.

Keywords: traditional games; learning motivation; physical education; elementary school; game-based learning

Introduction

Physical education, sports, and health (PJOK) uses movement to support students' physical, psychological, and social development (Hadi et al., 2020; Huda et al., 2025). In elementary school, lessons that invite children to move, cooperate, and make decisions can connect these aims to activities they enjoy (Samosir et al., 2024).

Learning motivation helps students sustain attention and take part in classroom tasks. Low motivation can limit engagement in physical education, making lesson design an important consideration (Kurniawan et al., 2024; Putri & Wijaya, 2024). Traditional games offer familiar rules, social interaction, and varied movement challenges. Previous work has discussed their potential to support motivation and participation in PJOK (Burhan & Hidayat, 2023; Huda et al., 2025; Setyawan et al., 2025).

The present study investigated whether learning motivation scores changed after fifth-grade students at SDN 1 Runggu took part in PJOK lessons using traditional games. It also quantified the difference between the pretest and posttest mean scores.

Materials and Methods

Study Design and Participants

The study used a quantitative, one-group pretest–posttest design. The participants were 20 fifth-grade students at SDN 1 Runggu selected through purposive sampling. As all participants received the same lessons, the design permits a within-group comparison but does not provide a controlled estimate of the effect of traditional games.

Procedure and Instrument

Students completed a learning motivation questionnaire before the lessons. They then participated in PJOK lessons using traditional games across several meetings and completed the questionnaire again afterward. The source manuscript does not specify the games used, the number and duration of sessions, or the questionnaire items. The Likert-scale questionnaire was described as covering perseverance, interest, attention, and active participation. The



source states that item validity was assessed with Product–Moment correlations and reliability with Cronbach’s alpha, but it does not provide the resulting coefficients.

Data Analysis

Descriptive statistics summarized pretest and posttest scores. The source reports Shapiro–Wilk normality results, a Levene homogeneity test, a paired-samples correlation, and a paired-samples t-test calculated in SPSS. For a paired design, the distribution of within-student differences is the relevant normality assumption; no normality test for those differences was reported. A Levene test is not a requirement for a paired-samples t-test. Significance values displayed by SPSS as .000 are reported here as $p < .001$.

Results

Table 1. Descriptive motivation scores

Measure	Pretest	Posttest
Students (n)	20	20
Mean score	62.5	78.9
Highest score	75	90
Lowest score	50	70

The mean motivation score rose by 16.4 points, from 62.5 before the lessons to 78.9 afterward. The minimum and maximum scores also increased.

Table 2. Reported Shapiro–Wilk tests

Measurement	W	n	p
Pretest	0.958	20	0.512
Posttest	0.964	20	0.623

Neither test indicated a departure from normality at the .05 level for the separate measurements. These results do not assess the distribution of paired differences.

Table 3. Reported Levene test

F	df1	df2	p
1.214	1	38	0.277

The original analysis reported $p = .277$ for Levene’s test. This test is not needed for the paired comparison and is included here to preserve the reported result.

Table 4. Paired-samples descriptive statistics

Measurement	Mean	n	SD	SE
Pretest	62.5	20	6.12	1.36
Posttest	78.9	20	5.48	1.22

Table 5. Reported paired-samples correlation

n	r	p
20	0.721	$< .001$

**Table 6.** Reported paired-samples t-test (pretest minus posttest)

Mean difference	SD of differences	t	df	p
-16.4	5.21	-14.07	19	< .001

The reported t-test indicates higher motivation scores after the lessons, $t(19) = -14.07$, $p < .001$. The table retains the source values as reported. The paired correlation and the two separate standard deviations do not appear to reproduce the reported standard deviation of differences; the original SPSS output should be checked before submission.

Discussion

Students reported higher learning motivation after the traditional game lessons. The 16.4-point increase may reflect the appeal of familiar play activities and the opportunities they provide for movement, participation, and interaction. Related studies have described positive motivational responses to traditional games in physical education (Burhan & Hidayat, 2023; Huda et al., 2025; Kurniawan et al., 2024; Setyawan et al., 2025). Wardana et al. (2025) also examined a game-based activity intended to raise students' motivation.

The interpretation should remain limited to what was measured. Although the questionnaire included attention and active participation as indicators, the study does not report their scores separately or present an independent observation of classroom behavior. Moreover, a one-group design cannot rule out changes associated with repeated testing, ordinary classroom experience, or other events between measurements. The study therefore supports an association between the lessons and improved motivation scores in this class, rather than a definitive causal effect.

For teachers, traditional games are a practical option when designing PJOK activities that invite participation. Future research could specify the game activities and lesson schedule, report the questionnaire's validity and reliability results, compare classes receiving different lesson approaches, and assess motivation and participation over a longer period. The reported statistics should also be reconciled with the original paired-samples output.

Conclusions

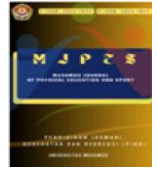
Among 20 fifth-grade students at SDN 1 Runggu, mean motivation increased from 62.5 to 78.9 after PJOK lessons incorporating traditional games. The reported paired comparison was statistically significant, $t(19) = -14.07$, $p < .001$. These findings suggest that traditional games may be a useful way to engage students, although a controlled study is needed to determine whether the games themselves caused the improvement.

Recommendations

PJOK teachers may adapt traditional games to their learning objectives, available space, and students' needs. Future studies should include a comparison group, describe the intervention in detail, and verify the statistical output before reporting an effect.

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