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THE ROLE OF MOTIVATION AND TEACHER SUPPORT IN ENHANCING ELEMENTARY STUDENTS' PHYSICAL FITNESS THROUGH RHYTHMIC GYMNASTICS PROGRAM

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Abstract
This study investigates the influence of student motivation and teacher support on predicting physical fitness levels in primary school pupils engaged in rhythmic gymnastics programs. Employing a correlational quantitative methodology, data were gathered from 53 fourth-grade pupils at SD Al-Firdaus Islamic School in Samarinda during April and May 2025. Three validated surveys assessed student motivation (10 items), teacher support (8 items), and physical fitness (7 items) utilizing a 4-point Likert scale. The results indicated substantial positive connections among motivation and physical fitness ($r=0.684$, $p<0.01$), teacher support and physical fitness ($r=0.496$, $p<0.01$), as well as motivation and teacher support ($r=0.642$, $p<0.01$). Multiple regression analysis indicated that motivation and teacher support collectively accounted for 52.3% of the variance in physical fitness ($R^2=0.523$, $F=26.914$, $p<0.001$). Motivation was identified as the more significant predictor ($\beta=0.547$, $p<0.001$) in contrast to teacher support ($\beta=0.145$, $p=0.284$). These findings underscore the vital importance of inner and extrinsic motivation in improving physical fitness via rhythmic gymnastics, while instructor support offers significant contextual facilitation.

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INTRODUCTION

An important global health concern among primary school pupils is their degree of physical fitness. According to the World Health Organization, children's non-communicative diseases cannot be prevented without enough physical activity, which also helps to encourage lifelong healthy practices (Bull et al., 2020). Global statistics reveal that just 19% of children globally get the required 60 minutes of daily moderate-to- intense physical activity (Aubert et al., 2018). In Indonesia,

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where just 27% of kids follow recommended physical activity guidelines, the situation is particularly dire (Andriyani et al., 2020).

Recent research show that for primary school pupils, physical fitness encompasses not just physical health but also cognitive, emotional, and social well-being (Cattuzzo et al., 2016). Conventional approaches of physical education in Indonesia may give sport-specific skills top priority over thorough development of physical fitness, therefore excluding less athletically inclined youngsters (Maksum, 2018).

One useful intervention is rhythmic gymnastics, which offers several opportunities to improve physical fitness and foster creative expression, coordination, and creativity (Bobo-Arce & Méndez-Rial, 2016). Studies show that for primary school children, rhythmic gymnastics training can significantly improve flexibility, balance, coordination, and cardiovascular endurance (Douda et al., 2018).

The effectiveness of physical education initiatives has started to be connected with psychological aspects, most especially student motivation and teacher support. Self-Determination Theory (SDT) offers a thorough framework showing that children with increased physical activity engagement and fitness improvements have more autonomy, competency, and relatedness (Ryan & Deci, 2017; Vasconcellos et al., 2019).

It is well known that improving student interest and involvement in physical education depends on teacher help (Koka, 2021). Studies indicate that supportive teaching behaviors substantially affect student motivation and physical activity levels (Escriva-Boulley et al., 2018; Mouratidis et al., 2021).

Although motivation and teacher support are theoretically significant, research examining their combined effect on physical fitness outcomes in rhythmic gymnastics contexts is limited, particularly in Indonesian elementary schools. This study investigates the relationship between student motivation and instructor

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support about physical fitness results in Indonesian elementary school rhythmic gymnastics programs.

This research aims to: (1) examine the correlation between student motivation and physical fitness in rhythmic gymnastics, (2) investigate the relationship between teacher support and student physical fitness, and (3) evaluate the combined predictive ability of motivation and teacher support on physical fitness outcomes among Indonesian elementary school students.

METHOD

This study utilized a correlational quantitative research approach to investigate the links among student motivation, teacher support, and physical fitness levels. The correlational method was used to assess the strength and direction of relationships between variables (Creswell & Creswell, 2018).

The study population consisted of all fourth-grade students (N=53) at SD Al-Firdaus Islamic School Samarinda engaged in the rhythmic gymnastics program for the 2024-2025 academic year. Purposive sampling was utilized based on certain criteria: (1) active participation in rhythmic gymnastics for a minimum of one semester, (2) consistent attendance (at least 80%), (3) lack of physical limitations, and (4) signed parental approval. The total sample comprised 53 students (28 females, 25 males) aged 9 to 11 years (M=10.2, SD=0.7).

Three validated surveys were developed:

Student Motivation Questionnaire (SMQ): 10-item tool assessing intrinsic and extrinsic motivation grounded in Self-Determination Theory (Cronbach's α=0.86)

Teacher Support Questionnaire (TSQ): 8-item instrument assessing perceived teacher support in emotional, instructional, and motivational aspects (Cronbach's α=0.82)

Physical Fitness Self-Assessment (PFSA): 7-item questionnaire evaluating perceived physical fitness elements pertinent to rhythmic gymnastics (Cronbach's α=0.79)

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Every instrument applied a 4-point Likert scale: 1=strongly disagree, 4=strongly agree. Data gathering stretched April through May 2025. SPSS 26.0 was used for statistical studies including multiple regression analysis with significance set at p 0.05, descriptive statistics, and Pearson correlation coefficients.

RESULTS

Descriptive Statistics

Table 1 presents descriptive statistics showing students demonstrated moderate to high levels across all measured constructs.

Table 1. Descriptive Statistics of Study Variables (N=53)

Variable	Items	Range	Min	Max	Mean	SD
Student Motivation	10	10-40	15	40	27.81	5.42
Teacher Support	8	8-32	20	32	26.30	3.21
Physical Fitness	7	7-28	14	28	20.42	3.54

Correlation Analysis

Pearson correlation analysis revealed significant positive relationships between all variables (Table 2).

Table 2. Pearson Correlation Matrix

Variable	1	2	3
1. Student Motivation	-		
2. Teacher Support	0.642**	-	
3. Physical Fitness	0.684**	0.496**	-

**p<0.01

Multiple Regression Analysis

The regression model demonstrated statistical significance and accounted for 52.3% of the variance in physical fitness scores (R^2=0.523, F=26.914, p<0.001). Motivation was a substantial predictor (β=0.547, p<0.001), whereas teacher support did not attain statistical significance (β=0.145, p=0.284).

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DISCUSSION

The strong positive correlation between student motivation and physical fitness (r=0.684) aligns with the predictions of Self-Determination Theory. This link suggests that students with higher intrinsic motivation get better physical fitness outcomes, likely due to increased engagement, effort, and perseverance in rhythmic gymnastics training. The results corroborate prior studies suggesting that intrinsically motivated students exhibit elevated levels of physical activity and improved fitness (Dishman et al., 2018; Owen et al., 2014).

The strength of the motivation-fitness relationship surpasses that found in traditional physical education environments, where correlations typically range from 0.30 to 0.50 (Ntoumanis et al., 2021). This enhanced connection can be attributed to the unique characteristics of rhythmic gymnastics that align with intrinsic motivation principles. Rhythmic gymnastics inherently provides opportunities for creative expression (autonomy), incremental skill development (competence), and collaborative performances (relatedness).

The moderate positive correlation between teacher support and physical fitness (r=0.496) highlights the importance of supportive instructional practices. This research expands upon previous studies by demonstrating that teacher support influences both psychological outcomes and quantifiable fitness improvements (Haerens et al., 2018; Shen et al., 2020).

The significant correlation between motivation and teacher support (r=0.642) suggests that supportive teaching techniques may promote student motivation, creating a positive cycle of engagement and improvement. This interconnection supports ecological frameworks for understanding student development (Bronfenbrenner & Morris, 2016).

The multiple regression analysis revealed that motivation and teacher support together explained 52.3% of the variance in physical fitness. This substantial explanatory power exceeds that demonstrated in several physical education research, where psychological factors often account for 20-40% of fitness

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variance (Babic et al., 2016). The differing predictive abilities indicate that instructor support mostly impacts fitness results by enhancing student motivation rather than directly improving physical fitness.

These findings possess considerable ramifications for rhythmic gymnastics education. Programs ought to advocate strategies that augment student motivation, particularly intrinsic types centered on enjoyment, mastery, and personal growth. Teacher professional development should prioritize supportive pedagogical strategies, including effective communication, tailored feedback, and the creation of inclusive learning environments.

Cultural variables may further elucidate these connections within Indonesian contexts. The collectivist nature of Indonesian society may enhance the significance of teacher connections and social incentive factors (Santoso et al., 2022). Future research should investigate if culturally tailored motivating interventions could provide more significant benefits on fitness outcomes.

Multiple restrictions must be recognized. The cross-sectional method prohibits causal conclusions. The reliance on self-reported assessments of physical fitness may not accurately represent objective fitness levels. The specific context of this study may limit its generalizability to other educational settings.

CONCLUSION

This study demonstrates the significant impact of psychological factors on improving physical fitness through rhythmic gymnastics programs in primary schools. Student motivation was recognized as the primary predictor of physical fitness outcomes, whereas instructor support exerted strong indirect effects through its correlation with motivation. These findings emphasize that effective physical education programs must include both the development of physical skills and the motivated context in which learning occurs. Educational practitioners must prioritize the creation of supportive, autonomy-enhancing environments that foster intrinsic motivation for physical activity. Future research should investigate long-term relationships among these attributes and determine distinctive pedagogical

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strategies that improve both motivation and fitness results across diverse school settings.

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