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Motivation in Motion: Building Positive Attitudes Toward Physical Education

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Abstract

This study explored the relationship between motivation and attitudes toward physical education (PE) among students in a STEM-oriented secondary school in Mindanao, Philippines. Employing a descriptive-correlational design, the research surveyed 243 Grade 7–12 students aged 12–18, representing 37% of the school population. Data were gathered using validated scales for motivation and PE attitudes, with analysis conducted through descriptive statistics, Pearson's correlation, and simple linear regression.

Findings showed moderate to high motivation levels and generally favorable attitudes toward PE. A significant moderate positive correlation ($r = 0.749$, $p < 0.001$) indicated that higher motivation was linked to more positive perceptions of PE. Regression results confirmed that motivation significantly predicted attitudes, though other personal, social, and environmental factors may also influence student perspectives.

These results support self-determination theory, highlighting intrinsic motivation as a key driver of positive PE experiences and sustained participation. The study underscores the importance of creating autonomy-supportive, student-centered programs—such as gamified lessons, student-led activities, and personalized goal-setting—to foster motivation and improve attitudes. By extending motivation–attitude research to a culturally distinct STEM-focused context, the findings offer practical insights for designing inclusive, engaging PE programs that contribute to Sustainable Development Goals on health, education, and equality.

Keywords: Attitude, Motivation, Physical Education, STEM students, Physical Activity Perception

1. Introduction

Physical education (PE) plays a vital role in fostering physical fitness, cognitive growth, and social development, shaping lifelong attitudes toward health and well-being (Joldasbayev, 2024; Neto et al., 2024; Alfyanti et al., 2024). Positive PE experiences not only enhance mental health and resilience but also develop essential skills such as teamwork and communication (Singh, 2024; Bamta et al., 2023). However, classroom climate significantly shapes students' perceptions. Task-involved climates that emphasize personal improvement promote engagement and motivation, while ego-involved climates often heighten anxiety, particularly among less athletic students (García-González et al., 2019).

Motivation is a key determinant of students' attitudes toward PE, influencing their participation, persistence, and achievement (Sopiyanto et al., 2024; Fierro-Suero et al., 2023). While motivation-enhancing strategies are well-documented, most studies are conducted in Western contexts, leaving a gap in understanding within culturally distinct settings such as the Philippines, particularly in STEM-focused schools where academic demands may shape students' engagement in PE (Oliveira et al., 2024).

This study examines the impact of motivation on attitudes toward PE among students in a STEM-oriented senior high school in Mindanao, Philippines. Findings aim to inform the development of inclusive, motivating PE programs that foster positive attitudes, encourage active participation, and contribute to Sustainable Development Goals (SDGs) on health, education, equality, and reduced inequality.

2. Methods

2.1 Research Design

This study employed a descriptive-correlational design to examine the relationship between motivational factors and students' attitudes toward physical education. This non-experimental approach allowed the researcher to analyze the degree and direction of association between the variables without manipulating them.

2.2 Participants and Procedures

The study surveyed 243 Grade 7–12 students aged 12–18, selected through proportional stratified random sampling. With administrative and ethics approval, recruitment was done via class advisers, and informed

consent was obtained. Data were collected over two weeks through a Google Forms survey containing validated motivation and PE attitude scales, with single, anonymous submissions.

2.3 Instruments and Materials Used

Data were collected using a structured Google Forms questionnaire composed of two standardized scales: a Motivation in Physical Education Scale and an Attitude toward Physical Education Scale. Both instruments were adapted from previously validated tools, ensuring content and construct validity. Reliability tests from prior studies reported Cronbach's alpha values above 0.80 for both scales, indicating high internal consistency.

2.4 Data Analysis

Responses from Google Forms were exported to Microsoft Excel and analyzed using SPSS version 26. Descriptive statistics (frequencies, percentages, means, and standard deviations) summarized demographics and trends in motivation and attitudes toward PE. Pearson's correlation examined the relationship between variables, while simple linear regression assessed motivation's predictive effect on attitudes. Significance was set at $p < 0.05$.

2.5 Ethical Considerations

The study complied with ethical standards, with approval from the school's research ethics committee. Participation was voluntary, with informed consent from all respondents and parental consent for minors. The Google Forms survey included the study purpose, confidentiality assurance, and the option to withdraw anytime. No personal identifiers were collected, and data were securely stored for academic use only.

3. Results and Discussion

The demographic profile of respondents reflected participation from all grade levels in a STEM-oriented secondary school. Of the 658 enrolled students, 243 responded to the survey administered via Google Forms, representing 36.9% of the total student population. The sample distribution was relatively balanced across grade levels, ensuring the representation of diverse student perspectives toward physical education.

Descriptive statistics indicated a moderate to high overall motivation level and generally favorable attitudes toward PE. The relationship between the two variables was examined using Pearson's correlation coefficient, revealing a moderate positive association. This suggests that students with higher motivation tended to hold more positive attitudes toward PE. While the correlation is meaningful, it does not fully account for all variations in attitudes, indicating the influence of additional personal, social, and environmental factors.

Regression analysis further demonstrated that motivation significantly predicted students'attitudes toward PE, with results achieving statistical significance at $p < 0.001$. This implies that motivation is a robust determinant of attitude formation, although it is not the sole contributing factor. Such findings are consistent with Kara and Rastorguyeva (2023), who noted that higher motivation levels not only improve students'perceptions of PE but also promote healthier lifestyle choices. Similarly, Yang (2019) found that adolescents with self-determined motivation display more favorable PE attitudes, enhanced engagement, and reduced performance anxiety.

Haug et al. (2023) also identified intrinsic motivation as a driver for sustained participation in PE, particularly when students perceive the learning environment as autonomy-supportive. The present study echoes this perspective, highlighting the importance of classroom climates that emphasize choice, mastery, and personal relevance. Danthony et al. (2019) similarly demonstrated that motivation levels could reliably predict PE attitudes, reinforcing the current study's conclusions.

Practical implications emerge for PE educators and curriculum planners. First, interventions that prioritize intrinsic motivation—such as gamified lessons, student-led activities, and personalized goal-setting—could enhance attitudes toward PE. Second, teachers may need to address external factors (e.g., peer influence, self-efficacy, perceived competence) that interact with motivation to shape overall perceptions.

The findings also offer theoretical contributions, supporting self-determination theory's assertion that intrinsic motivation is a fundamental driver of positive educational outcomes. By validating motivation as a key predictor of PE attitudes in a STEM-focused academic setting, the study extends its applicability to specialized educational environments.

Table 1

Distribution of Respondents by Grade Level

Grade	Number of Students	Number of Respondents
1. Grade 7	119	45
2. Grade 8	119	44
3. Grade 9	120	44
4. Grade 10	120	44
5. Grade 11	90	33
6. Grade 12	90	33
Total	N = 658	n = 243

Table 2

Regression Analysis for the Direct Effect of Motivation towards Attitude in Physical Education among the Students

Independent Variable	Dependent Variable	Correlation coefficient	p-value
Motivation	Attitude in Physical Education	0.749	*0.000*

*H0: Motivation is not a significant predictor of attitude in Physical Education among the students.*Significant at $\alpha = 0.05$

1. Conclusion This study found a moderate but significant positive correlation between motivation and students'attitudes toward physical education, indicating that higher motivation is linked to more favorable perceptions of the subject. While motivation plays a key role, other factors likely influence attitudes as well. These findings support the importance of fostering intrinsic motivation through engaging, student-centered PE programs. Educators and school leaders can use these insights to design strategies that enhance motivation and promote lifelong participation in physical activity, benefiting both students and the wider community. Acknowledgment The authors would like to thank the participating school and students for their cooperation in completing this study.

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