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Exploring the Interplay of Self-Concept, Self-Efficacy, and Motivation in Physical Education: A Comparative Study of Boarding and Regular Schools

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Abstract

Students's participation in physical education is determined by learning motivation. Studies examining Self-concept, Self-efficacy, and PE learning motivation in boarding and reguler school is still limited. This study aims to investigate the relationship between self-concept and self-efficacy and their impact on PE learning motivation among boarding and regular students. The research method employed is quantitative, utilizing a cross-sectional approach. The sample in this study consisted of 114 students from SMA Negeri 1 Comal (regular) and 114 students from MAN Pemalang (boarding). The data collected using the Physical Self-Description Questionnaire-Short (PSDQ-S), the General Self-Efficacy Scale (GSES), and Physical Education Learning Motivation questionnaire. The data analysis technique used the correlation analysis. The results indicate that self-concept and self-efficacy are significantly associated with physical education learning motivation among boarding and regular school students with a p-value of 0.016 in boarding students and 0.041 in regular students ($p < 0.05$). This study shows that self-concept and self-efficacy are significant predictors of physical education learning motivation in both boarding and regular students, with a stronger influence observed in boarding students. These findings extend previous research by emphasizing group differences and the importance of exploring additional psychological, social, and environmental determinants of motivation in physical education.

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INTRODUCTION

Physical education is an integral part of the national curriculum that aims to develop aspects of health, physical fitness, critical thinking skills, emotional stability, social skills, reasoning, and moral character through physical activities and sports (Abadi et al., 2024; Wicaksono et al., 2025). Physical education can be defined as a learning process designed to guide students in becoming physically educated individuals (Johnson & Turner, 2016). Being physically educated here can be interpreted as being skilled and having a good understanding of what is good for their body or physique. This physical education learning experience is designed to foster and shape students into adopting a healthy and active lifestyle throughout their lives.

Through physical education, students are not only taught about various types of physical activities and sports, but also other values such as teamwork, discipline, and self-confidence. Furthermore, physical education can enhance students' concentration and cognitive abilities by incorporating a variety of physical activities. Research indicates that physical activity in school-age children is significantly correlated with improved concentration and working memory (Sember et al., 2020).

Furthermore, there is some evidence that physical activity can improve concentration and learning readiness, which indirectly benefits academic achievement (Bailey et al., 2009). Children who are accustomed to physical activity tend to develop better critical thinking skills later in life, which will benefit them in further education and adult life (Diamond, 2015).

However, motivation to learn physical education remains a challenge in many schools. One study found that students' intrinsic and extrinsic motivation scores in physical education remained low (Sin & Hudayani, 2020).The research results showed that students' intrinsic motivation scores in physical education lessons were 37.72%. Meanwhile, students' extrinsic motivation scores were 42.98%. The problems found in the observation of several students SMA Negeri 1 Comal (reguler) and MAN Pemalang (boarding) showed that students tended to have low motivation. This can be seen from students being reluctant to move, easily giving up when facing challenging movements, and perceiving physical education as less important.

Motivation plays a crucial role in improving student learning outcomes, as it can significantly influence physical education learning outcomes (Sari & Sin, 2020). Learning motivation is a crucial aspect of the physical education learning process, as it encourages students to be actively involved, enjoy the learning activities, understand the material, and enhance learning outcomes, perseverance, and creativity (Utomo & Komarudin, 2022). Students with high learning motivation will be more actively involved in learning, while those with low motivation will tend to participate less actively. Motivation plays a significant role in feelings of enjoyment, perceptions of competence, and experiences in physical education, thereby influencing students' participation in physical activity outside of school (Cox et al., 2008).

Furthermore, self-concept, which refers to how individuals perceive their abilities and values, also plays a significant role in motivating them to learn physical education. Research by Vaquero-Solís et al. (2021) shows that students with positive self-concept tend to be more motivated to participate in physical education activities. A positive self-concept can increase self-confidence in physical activity and various learning challenges. Furthermore, students with a positive self-concept are more motivated to engage in physical activity (Antonio Moreno-Murcia, 2012).

Self-efficacy is another important factor that can influence students' learning motivation in physical education. Students with high self-efficacy believe they are capable of achieving set

goals and successfully overcoming challenges. High self-efficacy is positively related to student learning motivation and engagement in physical education (Darmanto et al., 2024).

Research conducted by Puspitasari et al. (2021) shows a significant and positive relationship between self-efficacy and motivation. Students who feel capable and confident are more likely to participate actively in learning and physical activities. Conversely, students with low self-efficacy may feel anxious or hesitant about participating in physical education. This can lead to decreased motivation and engagement in the learning process. Low self-efficacy can hinder the learning process and student achievement in physical education (Chase, 2001).

Self-efficacy can be used as a measurement tool to assess a person's involvement in community physical activity. Several studies have demonstrated that self-efficacy is positively associated with a person's ability to participate in sports regularly (Peers et al., 2020; LaForge-MacKenzie & Sullivan, 2014). This suggests that student self-efficacy is closely related to motivation to learn physical education.

Boarding schools typically operate with a relatively closed management system and provide facilities such as dormitories and cafeterias to support students' daily living needs. As the number of boarding schools grows and students begin boarding at younger ages, this model has become a significant and distinctive component of the education system. In recent years, research on boarding schools has shifted from discussing their conceptual value to examining their role in supporting student development, including the effects of boarding on academic achievement (Foliano et al., 2019).

Boarding schools and regular schools have significant differences in their social and learning environments. Boarding school students live in a dormitory environment with intensive supervision, limited interaction with their families, and structured learning routines, which encourage independence but can reduce emotional support from family (Martin et al., 2021; Li et al., 2023). In contrast, regular school students have greater opportunities to receive direct social support from family, although their level of independence is often lower (Blau & Blau, 2021). Research indicates that the impact of the boarding environment on students' motivational development and emotional well-being varies according to the quality of social support and the school environment (Zhong et al., 2024).

Based on the background of the problem and the researcher's observations, the aim of this this study is to identify the correlation between self-concept and self-efficacy toward PE learning motivation, both in boarding and regular schools.

METHODS

The research method employed is quantitative, utilizing a cross-sectional approach.

Sample

The population in this study consisted of 1,408 students from two schools: SMA Negeri 1 Comal and MAN Pemalang. The sampling technique employed was *purposive sampling*, yielding a sample of 114 students from SMA Negeri 1 Comal (regular) and 114 students from MAN Pemalang (boarding). Data collected by google form in regular school and paper-based questionnaire for data collection in boarding school.

Instrument

The instruments used in the study included the Physical Self-Description Questionnaire-Short (PSDQ-S), developed by Marsh et al. (2010), for assessing self-concept in physical education learning. Self-efficacy in physical education learning utilizes the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), which has been adapted into an Indonesian version (Novrianto et al., 2019). PE learning

motivation uses a Physical Education Learning Motivation Questionnaire developed by Nur et al. (2019) consists of 29 statement items with a validity of 0.518 and a reliability of 0.906.

Data analysis techniques

The data analysis techniques employed in this study included descriptive statistics, normality tests, linearity tests, multivariate tests, simple correlation tests, and multiple regression tests. The analysis was conducted using SPSS version 26.

RESULTS AND DISCUSSION

This study aims to investigate the relationship between self-concept and self-efficacy and their impact on PE learning motivation among boarding and regular students.

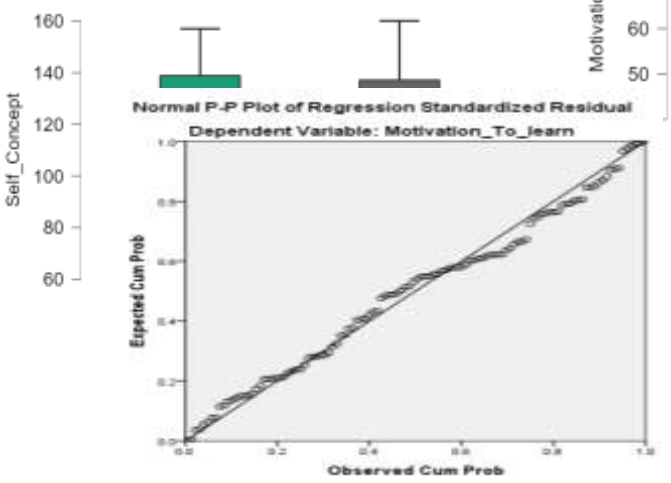


Figure 1. Self Concept

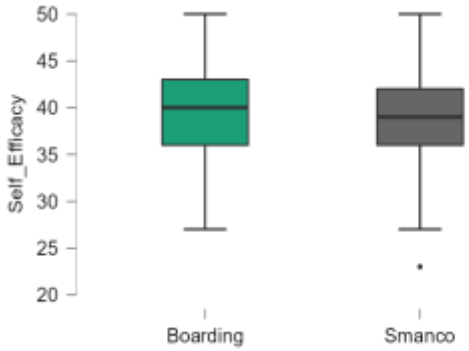


Figure 2. Self-efficacy

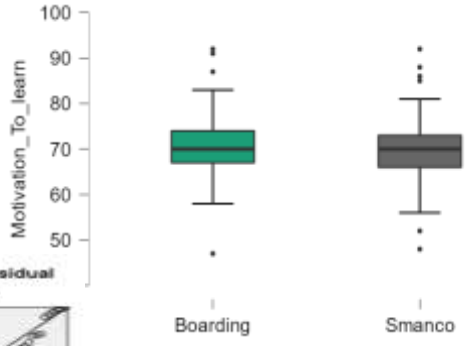


Figure 3. PE learning motivation

The results of the image show that the three variables in the boarding and regular groups have almost the same value pattern. Self concept In the boarding group, the minimum score is 86, and the maximum is 157, with a mean of 125.7 ± 16.2. In contrast, the regular group has a range of 65–160, with a mean of 124.3 ± 16.3. In self-efficacy, boarding is in the range of 27–50 with a mean of 39.9 ± 5.04, while regular is in the range of 23–50 with a mean of 39.0 ± 4.9. The learning motivation variable also shows equality, with boarding having a score of 47–92, a mean of 70 ± 6.6, and regular having a score of 48–92, a mean of 69.9 ± 6.4.

Figure 4. Normality test for the boarding group

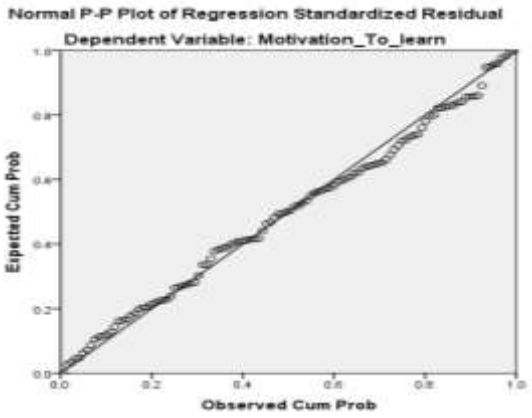


Figure 5 Normality test of the regular group

The results of the normality test above show that the research data distribution follows a diagonal line for both the regular and boarding student groups. Therefore, the data distribution for each variable is normally distributed.

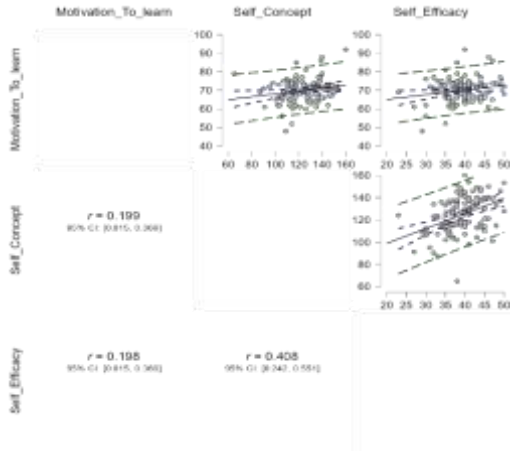


Figure 6. Correlation pearson test Boarding group

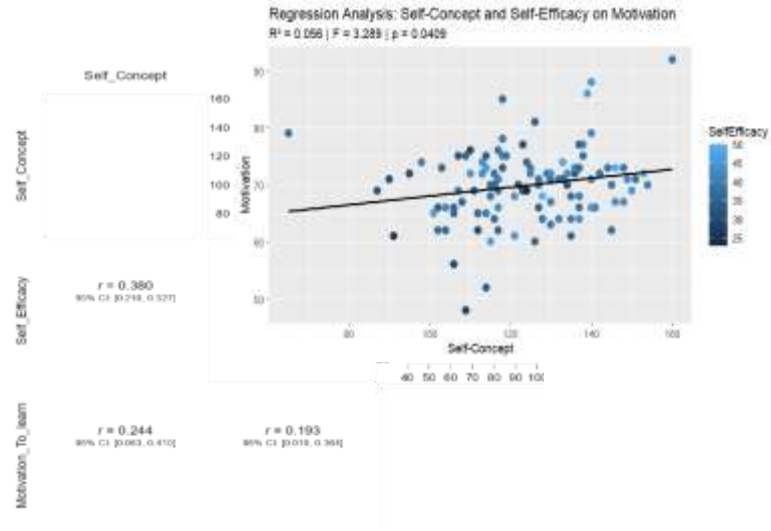
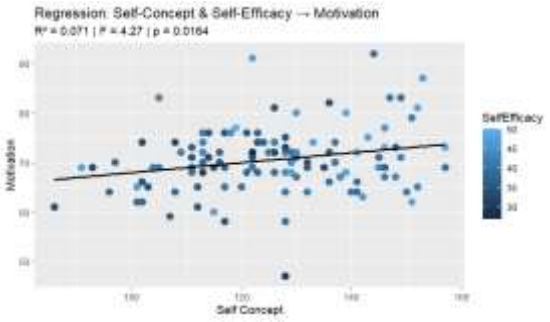


Figure 7. Correlation pearson test regular group

Based on the analysis results in Figures 6 and 7 , the simple correlation test results indicate a positive and significant relationship between self-concept and learning motivation in both student groups. In boarding students, the value of r = 0.244 (p = 0.009) indicates a weak correlation, while in regular students, the correlation value of r = 0.199 (p = 0.034) indicates a weak correlation. This indicates that the better the student's self-concept, the more likely their learning motivation



is to increase. Additionally, self-efficacy has a positive and significant relationship with learning motivation. In boarding students, the correlation value is r = 0.193 (p = 0.039), and in regular students, r = 0.198 (p = 0.035), both showing a weak but significant correlation. This finding confirms that the higher a student's confidence in

their abilities, the greater their learning motivation will be.

Figure 8 plots the regression test on the boarding group.

Figure 9 plots the regression test on the regular group

Based on the analysis results in Figures 8 and 9, the regression line plot shows a positive slope, indicating that an increase in Self-Concept scores tends to be followed by an increase in motivation. However, the distribution pattern of the points on the graph appears spread out. It is not concentrated close to the regression line, indicating that the relationship between Self-Concept and Motivation is weak in both groups of students.

The results of multiple regression analysis on each group of variables have a Sig. P-value < 0.05, indicating that the independent variables have a simultaneous effect on the dependent variable. In addition, the R-squared value for the boarding student group is 0.071, indicating that self-concept and self-efficacy can explain 7.1% of the variation in students' learning motivation. The Adjusted R-squared value of 0.055 means that 5.5% of the variation in the dependent variable, PE Learning Motivation, can be explained by variations in the two independent variables, Self-Concept and Self-Efficacy. In comparison, the remaining 95.5% (100% - 5.5%) is influenced by other variables outside the scope of this study.

In the regular student group, the R Square value was 0.056, which means that the two independent variables were only able to explain 5.6% of the variation in learning motivation. The Adjusted R Square value of 0.039 indicates that the variation in the dependent variable, PE Learning Motivation, can be explained by the variation in the two independent variables, Self-Concept and Self-Efficacy. In comparison, the remaining 97.1% (100% - 3.9%) is influenced by other variables outside the scope of this study.

The results of the study showed a relationship between self-concept and self-efficacy in motivating students to learn physical education, both in boarding and regular schools. In the boarding student group, the significance value of $p = 0.016$ (<0.05) indicated that self-concept and self-efficacy simultaneously had a significant effect on PE learning motivation. In the regular student group, the significance value of $p = 0.041$ (<0.05) also indicates a significant simultaneous effect. However, its strength is lower than in the boarding group.

In physical education learning, self-concept plays a crucial role because students' perceptions of their physical abilities influence their level of participation in learning, as well as their confidence in trying out the movement material provided by the teacher (Nopiyanto et al., 2022). This finding aligns with research conducted by Medina et al. (2023), which demonstrates that physical self-concept plays a significant role in influencing students' involvement and confidence in physical education.

Additionally, Self-efficacy is a predictor of motivation and self-regulation in learning, where students with higher self-confidence tend to be more enthusiastic and consistent in their academic activities (Zimmerman, 2000). Perception of competence, including self-efficacy, is an important factor that drives intrinsic motivation in physical activity and the learning process (Deci & Ryan, 2000). Research by Sproule et al. (2007) found that students with strong self-confidence exhibited more active participation and higher motivation in physical education lessons.

Research conducted by Puspitasari et al. (2021) shows a significant and positive relationship between self-efficacy and motivation. Students who feel capable and confident are more likely to participate actively in learning and physical activities. Conversely, students with low self-efficacy may feel anxious

or hesitant about participating in physical education.This can lead to decreased motivation and engagement in the learning process. Low self-efficacy can hinder students' learning and achievement in physical education (Chase, 2001). The more controlled and disciplined environment of boarding schools can facilitate more consistent experiences of success, thus slightly increasing the contribution of self-efficacy to learning motivation. The findings of this study show that self-concept and self-efficacy contribute to physical education learning motivation, but their influence differs between boarding and regular students. Although self-concept and self-efficacy variables have a weak relationship with student learning motivation in physical education, this suggests that other factors outside the scope of this study are also involved. This aligns with research conducted by Zhou (2025), which suggests that the dormitory environment can significantly influence student learning motivation through social interactions and peer relationships. Positive roommate interactions can increase academic motivation, while the overall dormitory environment shapes students' learning attitudes and behavioral patterns. Furthermore, Kurniawan et al. (2023) emphasized that the learning environment can significantly contribute to students' motivation for learning. This environment encompasses family factors, the residential community, the school environment, and interactions with peers, which collectively create psychosocial conditions that can either strengthen or weaken students' Motivation.

The main contribution of this study is its emphasis on contextual differences, showing that the role of psychological factors in physical education motivation depends on the learning environment. These findings provide new insight by highlighting that efforts to improve motivation should consider not only students' internal characteristics but also the specific environmental conditions of boarding and regular schools. Therefore, efforts to increase motivation to learn physical education require considering both internal student factors and external factors unique to each school environment.

CONCLUSION

Self-concept and self-efficacy have a significant relationship with physical education learning motivation in boarding and regular students, although the strength of the relationship is relatively low. This finding suggests that these two psychological factors play a supporting role in shaping physical education learning motivation. The difference in contribution between boarding and regular students indicates that the learning environment, social environment, and support from the school, dormitory, and family have a more dominant influence on students' learning motivation.Therefore, enhancing motivation in physical education requires a holistic approach that combines the development of students' internal psychological strengths with the optimization of learning environments adapted to the specific characteristics of each school setting.

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