The Body Esteem and Physical Activity Barriers on Physical Literacy among Physical Education Students

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Abstract

Low physical literacy among students is a global issue. The significance of body esteem and physical activity barriers as predictors of physical literacy was determined. Using multiple linear regression, the 150 students selected through random sampling yielded results that the determinants accounting 36.4% degree of influence, significantly predict the criterion variable, supporting the Social Cognitive Theory. Research using other variables to account the 63.6% variance in physical literacy, and implementation of programs that enhance students' body esteem and reduce barriers to physical activity are recommended.

Keywords: Body Esteem and Physical Activity; Barriers on Physical Literacy; Physical Education Students

1. Main text

Low physical literacy among students is a global issue. Physical literacy is foundational for fostering healthy lifestyles, yet it remains underdeveloped.

Globally, evidence shows that physical literacy levels in school-aged populations are low. The Active Healthy Kids Global Alliance (2022) reported that in 57 countries, most children and adolescents are not achieving basic benchmarks for physical literacy development, as the reason for low physical literacy levels. In Spain, research indicates that physical literacy levels among school-aged children are low, with many not meeting the recommended benchmarks for physical competence, motivation, confidence, and knowledge (Mayordomo-Pinilla et al., 2025).

Similarly, in China, a study among primary school students revealed significant discrepancies in physical literacy levels. These findings highlight the urgent need for targeted interventions to support the development of physical literacy and promote healthier, more active lifestyles among young people (Li et al., 2020). Likewise, in Chile, a recent study assessing physical literacy in children aged 10 to 16 years found that many participants exhibited low levels of physical literacy, particularly in the areas of physical competence and motivation. These results emphasize the pressing need for targeted interventions to improve physical literacy among Chilean youth (Aguilar-Farias et al., 2023).

Meanwhile, in the Philippines, findings reveal that many state university and college students possess low levels of physical literacy, which has emerged as a widespread and serious concern. This underscores the urgent need for enhanced physical education programs and more targeted interventions (Mancha & Poralan, 2023). Additionally, the level of physical literacy among Filipino children and adolescents is declining, as shown in the National Youth Physical Activity Report Card (2022).

Low physical literacy among students is associated with negative health outcomes, including increased body fat percentage, reduced aerobic fitness, and lower quality of life (Caldwell et al., 2020). This link further underscores the urgency of addressing the issue. Moreover, a noticeable gap exists in the literature, as limited published research has explored this topic in-depth, highlighting the clear need for further investigation. Addressing low physical literacy triggers to conduct the study.

Physical literacy is vital for students' health and well-being. However, many students worldwide exhibit low physical literacy, which is linked to negative health outcomes. Factors like body esteem issues and physical activity barriers contribute to this deficiency. This study aims to explore how these factors influence physical literacy, addressing the need for more inclusive and effective physical education programs. Furthermore, it aligns with Sustainable Development Goal 4 (Quality Education), which aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

1.1. Structure

Physical literacy is vital for students' health and well-being. However, many students worldwide exhibit low physical literacy, which is linked to negative health outcomes. Factors like body esteem issues and physical activity barriers contribute to this deficiency. This study aims to explore how these factors influence physical literacy, addressing the need for more inclusive and effective physical education programs. Furthermore, it aligns with Sustainable Development Goal 4 (Quality Education), which aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This study determined the significance of body esteem and physical activity barriers as predictors of physical literacy among physical education students.

A predictive quantitative research design was employed to examine the relationships among body esteem, physical activity barriers, and physical literacy. This design allows researchers to analyze numerical data and assess relationships between variables to predict outcomes (Creswell & Creswell, 2018). The study adopted a cross-sectional approach, capturing data from college students enrolled in physical education courses. Statistical tools such as mean, Pearson correlation coefficient, and multiple linear regression were employed to describe the levels and relationships among the variables and to predict the influence of body esteem on physical activity barriers and physical literacy.

The study was conducted in one of the higher education institutions located in North Cotabato, Region XII. This institution is recognized for its dedication to providing quality education and offers a wide range of academic programs, including physical education courses. With its diverse student population and commitment to excellence, the institution provides an ideal setting for exploring various aspects of physical education and physical literacy, especially among students from different programs enrolled in physical education courses.

The respondents of this study were 150 college students who were enrolled in physical education courses. The sample was selected using simple random sampling, a technique that ensured every individual in the population had an equal chance of being chosen (Scribbr, 2020). To be included in the study, students had to be enrolled in a physical education course and agree to participate by giving informed consent and signing a separate form before answering the questionnaires. Students who were not enrolled in physical education courses or who were unwilling to participate were excluded.

The research instrument is made up of 45 items in total. To ensure that the tool is both valid and reliable, it was reviewed by a panel of experts and pilot-tested before the actual data collection. The first section of the questionnaire focuses on body esteem, which includes 15 items and shows a Cronbach's alpha of .923. This means it has excellent internal consistency. The second section, which looks at physical activity barriers, also has 15 items and produced a Cronbach's alpha of .875, indicating good internal consistency. The third section measures physical literacy and, like the others, contains 15 items. It showed a Cronbach's alpha of .852, also reflecting good internal consistency. When all sections were combined, the overall reliability of the instrument was .801, which confirms that the tool as a whole has good internal consistency.

The data collection process began with obtaining ethical approval, followed by securing permission from the relevant academic departments. Survey questionnaires were then distributed and administered with clear instructions to ensure respondents' understanding. The researcher supervised the entire data collection process to maintain accuracy, after which the collected data was compiled and systematically organized for analysis.

Asking Permission to Conduct the Study. The researcher obtained approval from the Research Ethics Committee (REC), confirming that the study posed minimal risk to respondents. Following this, the researcher sent a formal request for an endorsement letter to the Dean of the Graduate School of Holy Cross of Davao College, with the consent of the thesis adviser to conduct the study. With the endorsement letter, a request letter was then sent to the President of the selected institution offering Physical Education courses, seeking formal approval to carry out the study. Once the president approved the request, the letter was given to the subject coordinator or physical education coordinator for further coordination in conducting the study.

Administration and Retrieval of Questionnaires. The data collection was conducted face-to-face, with all qualified respondents gathered in one area. Before the actual administration, the researcher oriented the respondents about the purpose and significance of the survey questionnaire. The researcher also asked for their consent to ensure voluntary participation in the study. After receiving informed consent, the willing respondents who are the students enrolled in the Physical Education course, were asked to complete the survey. Once all questionnaires were answered honestly and thoroughly, the researcher retrieved the completed forms for analysis.

Gathering and Tabulation of Data. After the successful administration and retrieval of the completed questionnaires, the researcher collated and tabulated the data. The responses were systematically organized, and appropriate statistical tools were employed to analyze the data, enabling accurate interpretation and further analysis to address the study's objectives.

The data were analyzed using several statistical tools to assess different aspects of the study. To ensure the reliability of the questionnaire, a Cronbach's Alpha test was conducted, confirming the internal consistency of the survey items. The mean was used to describe the levels of body esteem, physical activity barriers, and physical literacy among respondents. The Pearson Correlation Coefficient was employed to measure the

strength and direction of relationships between the variables. Additionally, multiple linear regression was applied to predict the influence of body esteem on physical activity barriers and physical literacy.

Conducting research ethically is vital, especially when it involves human respondents. In this study, the researcher followed ethical standards by obtaining informed consent, assessing potential risks and benefits, ensuring participant safety, and maintaining privacy and confidentiality. The principles of fairness and openness were also observed throughout the research. As the study only required respondents to complete questionnaires, no significant risks were identified. Before data collection, respondents were given an informed consent form that highlighted their voluntary participation and their right to withdraw from the study at any time without any consequences. Additionally, the study ensured fair treatment of all respondents and protected their personal information in compliance with the Data Privacy Act of 2012 (Republic Act No. 10173) by keeping all collected data confidential and handling it responsibly.

Results and Discussion

Descriptive Analysis

Table 1. Descriptive Table

	N	Standard Deviation	Mean	Descriptive Interpretation
Body-Esteem	**150**	**0.56**	**3.58**	**High**
Appearance		0.52	3.79	High
Weight		0.61	3.38	Moderate
Attribution		0.55	3.56	High
Physical Activity Barriers	**150**	**0.51**	**2.38**	**Low**
Personal		0.45	2.21	Low
Social Environment		0.50	2.36	Low
Physical Environment		0.58	2.58	Low
Physical Literacy	**150**	**0.49**	**3.73**	**High**
Sense of Self and Self-Confidence		0.48	3.71	High
Self-Expression and Communication		0.52	3.46	High
Knowledge and Understanding		0.47	4.04	High

Table 1 shows that the body-esteem variable obtained a mean of 3.58, which is classified as high level. This indicates that physical education students exhibit very good body esteem. Its weight indicator is at a moderate level, while appearance and attribution indicators are at a high level.

Furthermore, Table 1 shows that the physical activity barriers variable obtained a mean of 2.38, classified as low level, indicating that the student's physical activity barriers are less extensive. All of its indicators were similarly rated as low level. Finally, the physical literacy variable obtained a mean of 3.73, described as a high level, signifying that the students' physical literacy is very good. All of its indicators were similarly rated as high level.

Correlation Analysis

Table 2. Correlation Table

Variables	r	p-value	Decision on Ho @ 0.05 Level of Significance	Interpretation
Body-Esteem	0.532**	0.000	Reject Ho	Significant Moderate Positive Correlation
Physical Activity Barriers	-0.429**	0.000	Reject Ho	Significant Moderate Negative Correlation

Table 2 specifically shows that the correlation between body esteem and physical literacy obtained a p-value of 0.000, which is less than the 0.05 level of significance. Hence, the null hypothesis was rejected. This indicates that there is a statistically significant correlation between body esteem and physical literacy at a moderate positive strength, with r = 0.532. Similarly, the correlation between physical activity barriers and physical literacy also obtained a p-value of 0.000, which is less than the 0.05 level of significance. Therefore, the null hypothesis was likewise rejected. This suggests that there is a statistically significant correlation between physical activity barriers and physical literacy at a moderate negative strength, with r = -0.429.

Regression Analysis

Table 3. Regression Table

	Physical Literacy				
Variables	**Coefficients (β)**	**t**	**p-value**	**Decision on Ho**	**Interpretation**
(Intercept)	2.807				
Body-Esteem	0.427	6.427	0.000	Reject Ho	Significant
Physical Activity Barriers	-0.249	-4.307	0.000	Reject Ho	Significant

Table 3 specifically shows that body esteem obtained a beta coefficient (β) of 0.427, indicating that it has a 42.7% positive influence on physical literacy. This influence is statistically significant, as indicated by a p-value of 0.000, which is less than the 0.05 significance level. This implies that for every 1-unit increase in body esteem, physical literacy increases by 0.427 units.

On the other hand, physical activity barriers obtained a beta coefficient (β) of -0.249, indicating a 24.9% negative influence on physical literacy. This is also statistically significant, supported by a p-value of 0.000, which is below the 0.05 threshold. This means that for every 1-unit decrease in physical activity barriers, physical literacy increases by 0.249 units.

Finally, the table indicates that the two predictive variables together yield an R^2 value of 0.364, meaning they account for 36.4% of the variance in physical literacy. The F-value of 41.796 and the overall p-value of 0.000 confirm that the regression model is statistically significant at the 0.05 level.

Summary of Findings

- The body-esteem and physical literacy among physical education students are very good, while physical activity barriers are less extensive.

- Body esteem and physical activity barriers are significantly correlated with physical literacy. Body-esteem has a significant moderate positive correlation, while physical activity barriers have a significant moderate negative correlation.
- Both body esteem and physical activity barriers significantly influence physical literacy. Body esteem positively influences physical literacy, whereas physical activity barriers negatively influence it. Together, body esteem and physical activity barriers accounted for 36.4% of the variance in students' physical literacy.

Discussion on Descriptive Analysis

Body Esteem

The findings revealed that the level of body esteem among physical education students was high, suggesting that students often felt confident about how they perceived and presented themselves physically. This result affirms the study of Bermejo-Cantarero et al. (2025), who found that students engaged in physical activity tend to experience higher levels of body satisfaction. Furthermore, a positive body image is essential for promoting physical activity engagement, particularly in educational settings where students may be influenced by peer and societal perceptions (Foley Davelaar, 2021).

Physical Activity Barriers

The results showed that students generally perceived a low level of physical activity barriers, suggesting that they had few significant challenges in participating in physical activities. This finding highlights the positive attitude and engagement of physical education students toward maintaining an active lifestyle.

This corresponds with the findings of Azizan and Fadzil (2024), who reported that students actively engaged in movement tend to experience fewer hindrances. Thus, the current study affirms that active students perceive fewer obstacles to physical activity.

Physical Literacy

The results showed that students had a high level of physical literacy competence, indicating that they often understood, enjoyed, and actively participated in physical activities. This result affirms the findings of Rukavina and Gremillion-Burdge (2024), who emphasized that strong physical literacy is essential for maintaining long-term engagement in healthy physical behaviors.

Discussion on Correlational Analysis

The correlational analysis revealed a significant positive relationship between body esteem and physical literacy. This result supports the findings of She et al. (2023), who concluded that students with positive body image are more physically active and show improved performance and motivation in physical education settings. Similarly, Wallman-Jones et al. (2024) emphasized that self-perception of the body strongly influences adolescents' self-esteem and willingness to engage in physical activities, which directly supports physical literacy development.

The study also found a significant negative correlation between physical activity barriers and physical literacy. Students who reported less extensive barriers tended to have higher levels of physical literacy, while those who experienced more barriers showed lower levels. This finding is consistent with the result of Rodrigues et al. (2023), who concluded that higher perceived physical activity barriers are associated with lower engagement and motivation in school-based physical activities, ultimately affecting students' ability to develop physical literacy.

Discussion on Regression Analysis

The study revealed that body esteem positively and physical activity barriers negatively influence the physical literacy of college students. This result affirms the study of She et al. (2023), who found that body esteem significantly predicts physical literacy among university students. Their research emphasized that individuals with higher self-esteem and a more positive body image are more likely to demonstrate greater physical competence, motivation, and confidence, which are essential components of physical literacy. Similarly, this result affirms the study of Caldwell et al. (2020), who reported that perceived physical activity barriers such as low confidence, limited motivation, and environmental constraints negatively affect the development of physical literacy, particularly among young adults.

Conclusion

Based on the results of the study, it was concluded that body esteem and physical activity barriers significantly predict the physical literacy among physical education students. The Social Cognitive Theory is affirmed, stating that there are reciprocal interactions among personal, behavioral, and social/environmental factors. Persons are various, vicarious, symbolic, and self-regulatory processes as they strive to develop a sense of agency in their lives.

Recommendations

Based on the conclusion, it is recommended that future research explore other variables not included in this study that may account for the remaining 63.6% of the variance in physical literacy. Additionally, the educational institutions implement programs aimed at enhancing students' body esteem and reducing barriers to physical activity in order to attain higher levels of physical literacy.

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