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Journal of Physical and Outdoor Education
Vol. 6 No. 2, October 2024, pp. 41-51

Correlation Analysis between Physical Literacy, Physical Activity, and Physical Fitness in Students of SMA 1 Kolaka

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Abstract

This study aims to analyze the correlation between physical literacy, physical activity, and physical fitness among students of SMA 1 Kolaka. Using a cross-sectional research design, this study involved 200 randomly selected students. Data were collected through physical literacy questionnaires, physical activity records, and physical fitness tests. Data analysis employed Pearson correlation tests and multiple linear regression. Results showed significant positive correlations between physical literacy and physical activity ($r = 0.68$, $p < 0.001$) and physical fitness ($r = 0.72$, $p < 0.001$). Physical activity also positively correlated with physical fitness ($r = 0.75$, $p < 0.001$). Regression analysis revealed that physical literacy and physical activity together explained 65% of the variation in students' physical fitness. These findings emphasize the importance of enhancing physical literacy and promoting physical activity to improve high school students' physical fitness.

Keywords: physical literacy, physical activity, physical fitness, high school students

INTRODUCTION

Physical fitness is a crucial aspect in the holistic development of adolescents, especially high school students. In the increasingly dominant digital era, the declining trend of physical activity among adolescents is a global concern (Guthold et al. 2020). This phenomenon not only impacts physical health, but also has the potential to affect students' academic performance and psychosocial well-bein (Donnelly et al. 2016) In the Indonesian context, particularly in SMA 1 Kolaka, Southeast Sulawesi, the urgency to understand the factors that contribute to students' physical fitness is increasing.

Physical literacy, a concept that encompasses the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in lifelong physical activity, has emerged as an important paradigm in physical education and health promotion (Whitehead 2019). Recent studies suggest that physical literacy has the potential to influence physical activity levels and, in turn, individuals' physical fitness (Edwards et al. 2017a). However, the relationship between these three variables physical literacy, physical activity and physical fitness is still not fully understood in the context of

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Indonesian adolescents. Social Cognitive Theory suggests that physical literacy development influences physical activity through enhanced self-efficacy and positive outcome expectations (Bandura 2004), while Ecological Systems Theory emphasizes the role of multi-level environmental factors in shaping physical activity behaviors (Bronfenbrenner and Morris 2007). Exercise Physiology Theory further explains how sustained physical activity leads to physiological adaptations that improve physical fitness components (Powers and Howley 1995). The complexity of this relationship is particularly relevant given Indonesia's unique socio-cultural context, where traditional physical activities, community values, and local infrastructure significantly influence youth physical development patterns (Rahmania 2024a). This research gap presents an opportunity to develop an "Indonesian Youth Physical Literacy Development Model" that integrates cultural elements, educational systems, and environmental factors (Cairney et al. 2019a), potentially leading to more effective, culturally-appropriate interventions for promoting physical activity and fitness among Indonesian adolescents.

Previous research has indicated a positive correlation between physical activity and physical fitness in adolescents (Ortega et al. 2008). In addition, a study by Cairney et al. (2019) demonstrated that physical literacy-based interventions can increase participation in physical activity. However, most of these studies were conducted in Western countries, so generalization of the findings to the Indonesian context needs to be done with caution.

In Indonesia, research on physical literacy is still limited, especially in relation to physical activity and physical fitness of high school students. Studies across different regions of Indonesia have shown varying results: in Central Java, research found moderate levels of physical literacy among high school students (Afandi, Aswara, and Bekti 2024); in West Java, studies indicated varying physical literacy levels among junior high school students with an emphasis on the role of physical education teachers (Friskawati 2024); in Yogyakarta, investigations revealed the importance of physical education curriculum in developing physical literacy (Rahmania 2024b); and in Malang, research highlighted the relationship between physical activity and physical fitness in adolescents (Nopembri, Saryono, and Muktiani 2020). While these regional studies provide valuable insights, their findings cannot be generalized to the entire Indonesian adolescent population due to the country's vast geographical, cultural, and socioeconomic diversity. A systematic review of physical literacy studies in Southeast Asia attempted to provide a broader perspective but (Cornish et al. 2020)noted the scarcity of comprehensive research in Indonesia. This knowledge gap represents an important foundation for comprehensive research that considers Indonesia's diverse contexts and populations.

Journal of Physical and Outdoor Education, 6 (2) 2024 | 41-51
ISSN : 2721-9992 (Online)
ISSN : 2656-1883 (Print)

Given the importance of physical fitness for the optimal development of adolescents and the potential role of physical literacy in increasing physical activity, this study aimed to analyze the correlation between physical literacy, physical activity, and physical fitness in SMA 1 Kolaka students. A better understanding of these relationships is expected to provide valuable insights for the development of effective intervention strategies to improve students' physical fitness, as well as contribute to the scientific literature in the Indonesian context.

Through this research, a deeper understanding of the dynamics between physical literacy, physical activity, and physical fitness in the context of secondary education in Indonesia is expected. The novelty of this study is that it informs physical education policy and practice, and encourages the development of more effective intervention programs to improve the health and fitness of high school students.

METHOD

Type of research

This study used a quantitative approach with a cross-sectional design to analyze the correlation between physical literacy, physical activity, and physical fitness in SMA 1 Kolaka students. This method was chosen because it allows data collection from a large number of participants in a relatively short time, and is suitable for identifying patterns of relationships between variables (Levin 2006).

Population and sample

The target population of this study is all SMA 1 Kolaka students enrolled in the 2023/2024 academic year, with a total population of approximately 800 students. Using the Slovin formula with a 5% error rate, the minimum sample size required is 267 students. To anticipate the possibility of incomplete data, the sample size was increased to 300 students.

The sampling technique used was stratified random sampling to ensure proportional representation of each grade level (X, XI, and XII) and major (Science, Social Studies, and Language). Inclusion criteria included: (1) active students of SMA 1 Kolaka, (2) aged 15-18 years, and (3) in good health that allowed participation in the physical fitness test. Exclusion criteria included students with medical conditions that prohibited participation in intensive physical activity.

Instrument

1. Physical Literacy: Measured using the Physical Literacy Assessment for Youth (PLAY) tool developed by Canadian Sport for Life (2013); Kriellaars, Kozera, and Robillard (2013)and adapted into Bahasa Indonesia. The instrument includes an assessment of physical competence, motivation and confidence, as well as knowledge

and understanding of physical activity.

2. Physical Activity: Measured using the short version of the International Physical Activity Questionnaire (IPAQ) which has been validated for use in Indonesian adolescents (Chu et al. 2015). This questionnaire assesses the frequency, duration, and intensity of physical activity in the past week.
3. Physical Fitness: Assessed using the student fitness test indonesia (TKSI) for the age group of 16-19 years, which consists of five test items: 60-meter run, hanging body lift (boys) / hanging elbow bend (girls), 60-second sit-up, upright jump, and 1200-meter (boys) / 1000-meter (girls) run.

Data Collection Techniques

1. Preparatory stage: Involves obtaining research permits, coordinating with the school, and training research assistants.
2. Implementation stage:
   a. Students who were selected as samples were given an explanation of the study and asked to fill out a consent form.
   b. Completion of the physical literacy and physical activity questionnaires was carried out in the classroom under the supervision of the research team.
   c. Physical fitness tests were carried out on the school field in small groups, guided by the research team and physical education teachers.
3. Post-collection stage: Includes verification of data completeness and data entry into the analysis system.

Data analysis

Data analysis was conducted using IBM SPSS Statistics software version 26. The stages of analysis included:

1. Descriptive analysis to describe sample characteristics and score distribution for each variable.
2. Normality test using Kolmogorov-Smirnov test to determine the normality of data distribution.
3. Pearson correlation analysis to test the relationship between physical literacy, physical activity, and physical fitness. If the data is not normally distributed, the Spearman correlation test will be used.
4. Multiple linear regression analysis to assess the relative contribution of physical literacy and physical activity to physical fitness.
5. Analysis of variance (ANOVA) to compare scores between groups (for example, by gender or grade level).

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ISSN : 2721-9992 (Online)
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RESULTS AND DISCUSSION

Result

Of the 300 students invited to participate, 289 (96.3%) completed the entire data collection set. The final sample consisted of 152 females (52.6%) and 137 males (47.4%), with a mean age of 16.7 years (SD = 0.9). The distribution of the sample by grade level was as follows: grade X (33.2%), grade XI (34.6%), and grade XII (32.2%).

Table 1. Descriptive Statistics of Main Variables

Variable	Mean	SD	Min	Max
Physical Literacy (score 0-100)	68.5	12.3	35	95
Physical Activity (MET-Minutes/Weeks)	2456.7	1234.5	450	5680
Physical Fitnees (5-25)	15.8	3.7	7	24

Results showed that students' average physical literacy scores were at a moderate to high level. Students' physical activity levels varied, with an average of 2456.7 MET-minutes per week, which corresponds to the "moderate activity" category according to IPAQ guidelines. The average physical fitness score was in the "moderate" category based on TKSI norms.

Table 2. Pearson Correlation Coefficient between Key Variables

Variable			
Physical Literacy	1		
Physical Activity	0.68**	1	
Physical Fitnees	0.72**	0.75**	1

**p < 0.01

The analysis showed strong and significant positive correlations between all variables. Physical literacy was strongly correlated with physical activity ($r = 0.68$, $p < 0.01$) and physical fitness ($r = 0.72$, $p < 0.01$). The strongest correlation was found between physical activity and physical fitness ($r = 0.75$, $p < 0.01$).

To assess the relative contribution of physical literacy and physical activity to physical fitness, multiple linear regression analysis was conducted. The results of the analysis are presented in Table 3.

Table 3. Multiple Linear Regression Analysis Results

Variable	B	SE B	β	t	p
Konstanta	-5.62	0.89		-6.31	<0.001
Physical Literacy	0.11	0.02	0.36	5.50	<0.001
Physical Activity	0.001	0.0002	0.48	7.33	<0.001

$R^2 = 0.65$, $F(2, 286) = 265.34$, $p < 0.001$

The regression model explained 65% of the variation in physical fitness scores ($R^2 = 0.65$, $F(2, 286) = 265.34$, $p < 0.001$). Both physical literacy ($\beta = 0.36$, $p < 0.001$) and physical activity ($\beta = 0.48$, $p < 0.001$) made significant contributions to the prediction of physical fitness, with physical activity having a slightly stronger influence.

Discussion

The results of this study confirmed a strong and significant relationship between physical literacy, physical activity, and physical fitness in SMA 1 Kolaka students. These findings are in line with previous studies conducted in different contexts (Edwards et al. 2017b); (Cairney et al. 2019b), showing the consistency of these relationships across cultures.

The strong correlation between physical literacy and physical activity (r = 0.68) indicates that students with higher levels of physical literacy tend to be more physically active. This can be explained through the motivational and self-confidence components of physical literacy, which play an important role in encouraging participation in physical activity (Whitehead 2019). These findings strengthen the argument that improving physical literacy can be an effective strategy to promote active lifestyles among adolescents.

Physical literacy (PL) is a multifaceted concept encompassing physical competence, motivation, confidence, knowledge, and understanding, which is crucial for lifelong physical activity engagement (Cale and Harris 2018). Research indicates a strong relationship between PL and physical fitness in adolescents, highlighting the importance of developing cognitive and affective domains of PL in physical education (Gilic et al. 2022). Studies show that many youth are not meeting recommended physical activity levels and performing below par in PL domains, particularly in cardiovascular fitness and self-efficacy (SarahJane Belton et al. 2019). A systematic review and meta-analysis of PL interventions demonstrated significant positive effects on various PL outcomes, with the strongest impact on physical competence (Cale and Harris 2018). These findings underscore the need for targeted approaches in physical education programs to enhance students' PL, emphasizing not only physical skills but also knowledge, understanding, and motivation towards physical activity (Cale and Harris 2018; Gilic et al. 2022).

Recent studies have consistently shown a positive correlation between physical activity and physical fitness across various populations. Among anesthesiology residents, a significant positive correlation (r = 0.618) was found between physical activity and fitness levels (Firdaus, Fuadi, and Erlangga 2023). Similarly, high school students demonstrated a strong relationship (r = 0.665) between physical activity and physical fitness (Lagarinda and Nurhayati 2024). The strongest correlation (r = 0.78) was observed in novice basketball athletes (Setiawan, Budiarto, and Afriyuandi 2020). University students also showed correlations between physical activity and fitness, particularly with higher duration activities and vigorous exercise frequency (Lipošek et al. 2018). However, despite these findings, a high percentage of students were found to be insufficiently physically active

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according to WHO guidelines (Lipošek et al. 2018). These studies collectively emphasize the importance of promoting physical activity to improve fitness levels across different age groups and populations.

Accumulating empirical evidence has illuminated the complex interrelationships between physical literacy (PL), physical activity (PA), and physical fitness (PF) among student populations. A comprehensive study by Zhang et al. (2022) demonstrated robust positive associations between components of physical fitness and physical literacy attributes, with particularly strong correlations observed in dimensions of confidence and physical competence. Ma et al. (2020) established a modest yet statistically significant correlation between perceived physical literacy and physical activity patterns among university students in China, while Yli-Piipari et al. (2020) provided compelling evidence that cardiorespiratory endurance and moderate-to-vigorous physical activity (MVPA) during physical education sessions serve as significant predictors of overall MVPA engagement in children. Additionally, Brown, Dudley, and Cairney (2020) advanced our understanding through their identification of five distinct physical literacy profiles in children, noting that individuals with more developed physical literacy profiles demonstrated sustained higher levels of physical activity participation longitudinally. Collectively, these findings suggest a nuanced interplay between physical literacy and physical activity as crucial determinants in the development and enhancement of physical fitness, indicating that physical literacy may serve as a fundamental catalyst in establishing enduring physical activity patterns from early developmental stages.

Recent research emphasizes the importance of physical literacy in school-based physical education programs. Physical literacy encompasses physical competence, motivation, confidence, and understanding related to physical activity (Belton et al. 2019; Castelli et al. 2014).Studies indicate that many youth are not meeting recommended physical activity levels and show deficiencies in various domains of physical literacy (Sarahjane Belton et al. 2019). To address these issues, comprehensive school physical activity programs are recommended as an effective framework for promoting physical literacy (Castelli et al. 2014). Physical education programs should focus on developing motor competence, self-awareness, and motivation in realistic, adaptable contexts that go beyond traditional competitive sports (Pot, Whitehead, and Durden-Myers 2018; Trecroci et al. 2021). Such approaches can help counteract the adverse effects of physical illiteracy and obesity, which can act as barriers to physical activity participation (Pot et al. 2018). Implementing these strategies in schools can provide increased opportunities for physical

activity engagement and foster lifelong physical literacy (Castelli et al. 2014; Pot et al. 2018).

Recent research highlights the limitations and advancements in physical activity measurement. While self-report questionnaires remain widely used due to their low cost and ability to collect data from large populations (Sallis and Saelens 2000), they are subject to recall bias and social desirability effects (Janz 2006). The need for more objective measures, such as accelerometers, is emphasized to improve accuracy (Janz 2006). Longitudinal studies, like the "45 and Up" cohort, provide valuable insights into physical activity patterns over time and their relationship to health outcomes (Bauman et al. 2022). However, standardization in reporting physical activity estimates is needed (Bauman et al. 2022). The assessment of physical literacy is also evolving, with a focus on fostering authentic human flourishing across the life course (Huang 2024). Future research should consider combining objective measurements with questionnaires and analytical techniques to enhance the validity of physical activity epidemiology studies (Janz 2006).

Overall, the results of this study confirm the importance of a holistic approach in improving adolescent physical fitness, which includes the development of physical literacy and the promotion of regular physical activity. The findings can serve as a basis for the development of more effective interventions and educational policies that support the health and fitness of high school students in Indonesia.

CONCLUSSION

This study revealed a strong and significant correlation between physical literacy, physical activity and physical fitness in students of SMA 1 Kolaka. The main findings showed that higher levels of physical literacy were associated with higher levels of physical activity and better physical fitness. Further analysis confirmed that physical literacy and physical activity together contributed significantly to variations in students' physical fitness, with physical activity having a slightly stronger influence.

These results emphasize the importance of a holistic approach in improving adolescent physical fitness. The development of physical literacy, which includes not only physical skills but also understanding, motivation and confidence related to physical activity, was shown to be as important as the promotion of physical activity itself. These findings have important implications for physical education policy and practice in schools, which should not only focus on increasing physical activity but also on developing the components of physical literacy as a whole.

Although this study provides valuable insights, it should be kept in mind that the cross-sectional design limits the ability to draw causal conclusions. Future research with a longitudinal design and objective measures of physical activity may provide a deeper understanding of the causal relationship between these three variables. In addition, exploration of contextual factors such as school environment, family support and access to sports facilities may provide a more comprehensive picture of the factors that influence adolescents' physical fitness.

Overall, this study confirms the importance of integrating physical literacy development into the physical education curriculum and health promotion programs in schools. By improving physical literacy and encouraging participation in physical activity, we can hope to improve physical fitness and, ultimately, the health and well-being of Indonesian high school students.

REFERENCES

Afandi, Muhammad Yusron, Agung Yuda Aswara, and Susilo Bekti. 2024. "Skills and Physical Literacy Activities of Primary School Age Children." *ACTIVE: Journal of Physical Education, Sport, Health and Recreation* 13(2).

Bandura, Albert. 2004. "Health Promotion by Social Cognitive Means." *Health Education & Behavior* 31(2):143–64.

Bauman, Adrian, Karen Lee, Ding Ding, and Philayrath Phongsavan. 2022. "Physical Activity Research in the First 15 Years of the" 45 and Up" Cohort Study: A Narrative Review and Citation Analysis." *Public Health Research & Practice* 32(4).

Belton, SarahJane, Johann Issartel, Bronagh McGrane, Danielle Powell, and Wesley O'Brien. 2019. "A Consideration for Physical Literacy in Irish Youth, and Implications for Physical Education in a Changing Landscape." *Irish Educational Studies* 38(2):193–211.

Belton, Sarahjane, Andrew McCarren, Bronagh McGrane, Danielle Powell, and Johann Issartel. 2019. "The Youth-Physical Activity Towards Health (Y-PATH) Intervention: Results of a 24 Month Cluster Randomised Controlled Trial." *PLoS One* 14(9):e0221684.

Bronfenbrenner, Urie, and Pamela A. Morris. 2007. "The Bioecological Model of Human Development." *Handbook of Child Psychology* 1.

Brown, Denver M. Y., Dean A. Dudley, and John Cairney. 2020. "Physical Literacy Profiles Are Associated with Differences in Children's Physical Activity Participation: A Latent Profile Analysis Approach." *Journal of Science and Medicine in Sport* 23(11):1062–67.

Cairney, John, Dean Dudley, Matthew Kwan, Rheanna Bulten, and Dean Kriellaars. 2019a. "Physical Literacy, Physical Activity and Health: Toward an Evidence-Informed Conceptual Model." *Sports Medicine* 49:371–83.

Cairney, John, Dean Dudley, Matthew Kwan, Rheanna Bulten, and Dean Kriellaars. 2019b. "Physical Literacy, Physical Activity and Health: Toward an Evidence-Informed Conceptual Model." *Sports Medicine* 49:371–83.

Cale, Lorraine, and Jo Harris. 2018. "The Role of Knowledge and Understanding in Fostering Physical Literacy." *Journal of Teaching in Physical Education* 37(3):280–87.

Castelli, Darla M., Erin E. Centeio, Aaron E. Beighle, Russell L. Carson, and Hildi M. Nicksic. 2014. "Physical Literacy and Comprehensive School Physical Activity Programs." *Preventive Medicine* 66:95–100.

Chu, Anne H. Y., Sheryl H. X. Ng, David Koh, and Falk Müller-Riemenschneider. 2015. "Reliability and Validity of the Self-and Interviewer-Administered Versions of the Global Physical Activity Questionnaire (GPAQ)." *PloS One* 10(9):e0136944.

Cornish, Katie, Gloria Fox, Trina Fyfe, Erica Koopmans, Anne Pousette, and Chelsea A. Pelletier. 2020. "Understanding Physical Literacy in the Context of Health: A Rapid Scoping Review." *BMC Public Health* 20:1–19.

Donnelly, Joseph E., Charles H. Hillman, Darla Castelli, Jennifer L. Etnier, Sarah Lee, Phillip Tomporowski, Kate Lambourne, and Amanda N. Szabo-Reed. 2016. "Physical Activity, Fitness, Cognitive Function, and Academic Achievement in Children: A Systematic Review." *Medicine and Science in Sports and Exercise* 48(6):1197.

Edwards, Lowri C., Anna S. Bryant, Richard J. Keegan, Kevin Morgan, and Anwen M. Jones. 2017a. "Definitions, Foundations and Associations of Physical Literacy: A Systematic Review." *Sports Medicine* 47:113–26.

Edwards, Lowri C., Anna S. Bryant, Richard J. Keegan, Kevin Morgan, and Anwen M. Jones. 2017b. "Definitions, Foundations and Associations of Physical Literacy: A Systematic Review." *Sports Medicine* 47:113–26.

Firdaus, Wildan, Iwan Fuadi, and M. Erias Erlangga. 2023. "Correlation Between Physical Activity and Fitness Level Among Anesthesiology and Intensive Care Residents." *Majalah Kedokteran Bandung* 55(4):240–46.

Friskawati, Gita Febria. 2024. "Teacher's Understanding of Early Childhood Physical Literacy: Thematic Analysis Based on Teaching Experience from an Indonesian Perspective." *Physical Education and Sport Pedagogy* 1–13.

Gilic, Barbara, Pavle Malovic, Mirela Sunda, Nevenka Maras, and Natasa Zenic. 2022. "Adolescents with Higher Cognitive and Affective Domains of Physical Literacy Possess Better Physical Fitness: The Importance of Developing the Concept of Physical Literacy in High Schools." *Children* 9(6):796.

Guthold, Regina, Gretchen A. Stevens, Leanne M. Riley, and Fiona C. Bull. 2020. "Global Trends in Insufficient Physical Activity among Adolescents: A Pooled Analysis of 298 Population-Based Surveys with 1· 6 Million Participants." *The Lancet Child & Adolescent Health* 4(1):23–35.

Huang, Yan. 2024. "A Critical Narrative Questioning the Assessment of Physical Literacy: Foster Authentic Human Flourishing across the Life Course." *Frontiers in Sports and Active Living* 6:1353386.

Janz, K. F. 2006. "Physical Activity in Epidemiology: Moving from Questionnaire to Objective Measurement." *British Journal of Sports Medicine* 40(3):191–92.

Kriellaars, D., T. Kozera, and B. Robillard. 2013. "Physical Literacy Assessment for Youth." *PLAY Workbook. Canadian Sport Institute—Pacific*.

Lagarinda, Ezra, and Faridha Nurhayati. 2024. "Analisis Aktivitas Fisik Terhadap Tingkat Kebugaran Jasmani Siswa." *JURNAL PENA EDUKASI* 11(1):1–10.

Levin, Kate Ann. 2006. "Study Design III: Cross-Sectional Studies." *Evidence-Based Dentistry* 7(1):24–25.

Lipošek, Silvester, Jurij Planinšec, Bojan Leskošek, and Aleksander Pajtler. 2018. "Physical Activity of University Students and Its Relation to Physical Fitness and Academic Success." *Annales Kinesiologiae* 9(2).

Ma, Rui-Si, Raymond Kim-Wai Sum, Ming-Hui Li, Yan Huang, and Xue-Liang Niu. 2020. "Association between Physical Literacy and Physical Activity: A Multilevel Analysis Study among Chinese Undergraduates." *International Journal of Environmental Research and Public Health* 17(21):7874.

Journal of Physical and Outdoor Education, 6 (2) 2024 | 41-51
ISSN : 2721-9992 (Online)
ISSN : 2656-1883 (Print)

Nopembri, Soni, A. Saryono, and Nur Rohmah Muktiani. 2020. "Literacy of Physical Education Teachers on ICT-Based Instructional Media.."

Ortega, Francisco B., Jonatan R. Ruiz, Manuel J. Castillo, and Michael Sjöström. 2008. "Physical Fitness in Childhood and Adolescence: A Powerful Marker of Health." *International Journal of Obesity* 32(1):1–11.

Pot, Niek, Margaret E. Whitehead, and Elizabeth J. Durden-Myers. 2018. "Physical Literacy from Philosophy to Practice." *Journal of Teaching in Physical Education* 37(3):246–51.

Powers, Scott K., and Edward T. Howley. 1995. "Exercise Physiology: Theory and Application to Fitness and Performances." *Medicine & Science in Sports & Exercise* 27(3):466.

Rahmania, Tia. 2024a. "Exploring School Environmental Psychology in Children and Adolescents: The Influence of Environmental and Psychosocial Factors on Sustainable Behavior in Indonesia." *Heliyon* 10(18).

Rahmania, Tia. 2024b. "Exploring School Environmental Psychology in Children and Adolescents: The Influence of Environmental and Psychosocial Factors on Sustainable Behavior in Indonesia." *Heliyon* 10(18).

Sallis, James F., and Brian E. Saelens. 2000. "Assessment of Physical Activity by Self-Report: Status, Limitations, and Future Directions." *Research Quarterly for Exercise and Sport* 71(sup2):1–14.

Setiawan, Edi, Budiarto Budiarto, and Asep Ramdan Afriyuandi. 2020. "Korelasi Antara Physical Activity Dan Physical Fitness Pada Atlet Bolabasket Level Pemula." *Jurnal Pendidikan Olah Raga* 9(2):192–201.

Trecroci, Athos, Pietro Luigi Invernizzi, Domenico Monacis, and Dario Colella. 2021. "Physical Illiteracy and Obesity Barrier: How Physical Education Can Overpass Potential Adverse Effects? A Narrative Review." *Sustainability* 14(1):419.

Whitehead, Margaret. 2019. *Physical Literacy across the World*. Routledge London, UK:

Yli-Piipari, Sami, Arto Gråsten, Mikko Huhtiniemi, Kasper Salin, Sanni Seppälä, Harto Hakonen, and Timo Jaakkola. 2020. "Predictive Strength of Physical Education-Centered Physical Literacy Indicators on Physical Activity." *Journal of Teaching in Physical Education* 40(2):303–11.

Zhang, Cheng, Yong Liu, Shuang Xu, Raymond Kim-Wai Sum, Ruisi Ma, Pu Zhong, Shixiang Liu, and Minghui Li. 2022. "Exploring the Level of Physical Fitness on Physical Activity and Physical Literacy among Chinese University Students: A Cross-Sectional Study." *Frontiers in Psychology* 13:833461.