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Physical Activity, Physical Fitness, Resilience, And Socio-Emotional Strength: A Correlational Study of High School Students

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ABSTRACT

This study aims to examine the relationship between physical activity, physical fitness, resilience, and social-emotional skills in senior high school (SMA) students. This study used a quantitative approach with a correlational design. The study sample involved 98 students of grades X and XI of SMA Negeri 1, Teluk Belengkong District, selected using a purposive sampling technique. Data were collected through a questionnaire adapted from The Physical Activity Questionnaire for Adolescents (PAQ-A), physical fitness measurements using the Multistage Fitness Test (MFT) or Bleep Test, adapted questionnaires from the resilience scales for adolescents, psychological symptoms, and clinical status in adolescents, and adapted questionnaires from the Development of Social Emotional Competency Scale for Students. Data analysis used Pearson correlation and multiple linear regression. The results of the study showed a significant relationship between physical activity and physical fitness ($r = 0.419$, $p < 0.05$), physical activity and resilience ($r = 0.298$, $p < 0.05$), physical activity and social emotional ($r = 0.295$, $p < 0.05$), physical fitness and resilience ($r = 0.235$, $p < 0.05$), physical fitness and social emotional ($r = 0.212$, $p < 0.05$), and resilience and social emotional ($r = 0.423$, $p < 0.05$). These findings indicate the importance of physical activity and physical fitness in supporting the resilience and social-emotional emotional of high school students.

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A. Conception and design of the study;
B. Acquisition of data;
C. Analysis and interpretation of data;
D. Manuscript preparation;
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INTRODUCTION

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Development of Social Emotional Competency Scale for Students. Data analysis used Pearson correlation and multiple linear regression. The results of the study showed a significant relationship between physical activity and physical fitness ($r = 0.419$, $p < 0.05$), physical activity and resilience ($r = 0.298$, $p < 0.05$), physical activity and social emotional ($r = 0.295$, $p < 0.05$), physical fitness and resilience ($r = 0.235$, $p < 0.05$), physical fitness and social emotional ($r = 0.212$, $p < 0.05$), and resilience and social emotional ($r = 0.423$, $p < 0.05$). These findings indicate the importance of physical activity and physical fitness in supporting the resilience and social-emotional emotional of high school students.

METHODS

In general, this section describes how the study was conducted. The subject matters of this section are (1) the study design; (2) the sample population or subject of the research; (3) data collection techniques and instrument development; and (4) data analysis techniques. Please use descriptive paragraphs. Use these questions as a guideline to write the method: (1) Is the design suitable for answering the question posed? (2) Is there sufficient information present to replicate the research? (3) Does the article identify the procedures followed? (4) Are these ordered in a meaningful way? (5) If the methods are new, are they explained in detail? (6) Was the sampling appropriate? (7) Have the equipment and materials been adequately described? (8) Is it clear what type of data was recorded? (9) Have the data been precise in describing measurements?

It is important to note that no need to use too many formulas or tables unless it is necessary to be displayed. This section must be written out briefly, concisely, and clearly, but adequately to be replicated. This section explains the research approach, subjects of the study, the conduct of the research procedure, the use of materials and instruments, data collection, and analysis techniques. These are not theories. In the case of statistical methods, formulas that are generally known should not be written down. Any specific criteria used by the researcher in collecting and analyzing the research data should be thoroughly described. This section should be written not more than 10% (for qualitative research) or 15% (for quantitative analysis) of the body.

RESULTS AND DISCUSSION

Result

The analysis of 98 respondents yielded the minimum, maximum, mean, and standard deviation values for each variable.

Table 1.
Descriptive Statistics of Research Variables

	N	Minumum	Maximum	Mean	Std. Deviation
Physical Activity	98	8	40	20,81	6,750
Physical Fitness	98	19,6	41,5	24,95	4,843
Resilience	98	56	87	76,58	6,199
Social-Emotional	98	43	92	72,09	8,307

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Table 2.
The results of the correlation between physical activity and physical fitness in students of SMA Negeri 1 Teluk Belengkong District

Results	N	r	P<0,05	Significant
Physical Activity	98	0,419	0,000	Significant
Physical Fitness	98			Significant

The results of the data analysis showed a correlation coefficient (r) of 0.419 with a significance value (sig.) of 0.000 < p (0.05). This indicates a significant positive relationship between physical activity and physical fitness in students of SMA Negeri 1 Teluk Belengkong District. In other words, the higher the level of physical activity of students, the higher their level of physical fitness. This finding is in line with previous studies that emphasize the importance of physical activity in improving physical fitness

Table 3.
The results of the correlation between physical activity and resilience in students of SMA Negeri 1 Teluk Belengkong District

Results	N	r	P<0,05	Significant
Physical Activity	98	0,298	0,003	Significant
Resilience	98			Significant

The data analysis results show an r value of 0.298 with a significance value (sig.) of 0.003 < p (0.05). This indicates a significant positive relationship between physical activity and resilience in students at SMA Negeri 1, Teluk Belengkong District. These findings support the view that physical activity can contribute to increased student resilience. Students who are more physically active tend to have better abilities to cope with stress and adversity.

Table 4.
The results of the correlation between physical activity and social emotional skills in students of SMA Negeri 1 Teluk Belengkong District

Results	N	r	P<0,05	Significant
Physical Activity	98	0,295	0.003	Significant
Social Emotional	98			Significant

The data analysis results showed an r value of 0.295 with a significance value (sig.) of 0.003 < p (0.05). This indicates a significant positive relationship between physical activity and social-emotional skills in students at SMA Negeri 1, Teluk Belengkong District. This finding indicates that physical activity can play a role in improving students' social and emotional well-being. Through physical activity, students have the opportunity to interact socially, build self-confidence, and learn to manage their emotions.

Table 5.
The results of the correlation between Physical Fitness and Resilience in students of SMA Negeri 1 Teluk Belengkong District

Results	N	r	P<0,05	Significant
Physical Fitness	98	0,235	0,020	Significant
Resilience	98			Significant

The data analysis results showed an r value of 0.235 with a significance value (sig.) of 0.020 < p (0.05). This indicates a significant positive relationship between physical fitness and resilience in students at SMA Negeri 1 Teluk Belengkong District. Good physical fitness can provide students with the physical and mental resources necessary to cope with stress and difficulties.

Table 6.
The results of the correlation between Physical Fitness and Social Emotional in students of SMA Negeri 1 Teluk Belengkong District

Results	N	r	P<0,05	Significant
Physical Fitness	98	0,212	0,036	Significant
Social Emotional	98			Significant

The data analysis results showed an r value of 0.212 with a significance value (sig.) of 0.036 < p (0.05). This indicates a significant positive relationship between physical fitness and social-emotional skills in students at SMA Negeri 1 Teluk Belengkong District. Good physical fitness can increase students' self-confidence, which in turn can improve their social-emotional skills.

Table 7.
The results of the correlation between resilience and social emotional in students of SMA Negeri 1 Teluk Belengkong District

Results	N	r	P<0,05	Significant
Resilience	98	0,423	0,000	Significant
Social Emotional	98			Significant

The data analysis results showed an r value of 0.423 with a significance value (sig.) of 0.000 < p (0.05). This indicates a significant positive relationship between resilience and social-emotional resilience among students at SMA Negeri 1 Teluk Belengkong District. Resilience and social-emotional are closely related, where resilience can improve students' ability to manage emotions and build positive relationships, while strong social-emotional emotional can increase students' resilience

Discussion

The results of this study provide empirical evidence of a significant relationship between physical activity, physical fitness, resilience, and social-emotional well-being in high school students. These findings are consistent with previous research highlighting the importance of physical activity and fitness in improving various aspects of student health and well-being (Doewes and Nuryadin 2022).

The positive relationship between physical activity and fitness indicates that increased physical activity contributes to improved physical fitness in students. This aligns with previous research showing a significant relationship between physical activity and physical fitness; the higher the frequency of physical activity, the better their physical fitness level (Mahfud, Gumantan, and Nugroho 2020).

The positive relationship between physical activity and resilience indicates that students who are more physically active tend to be more resilient in the face of stress

and adversity. This can be explained by several mechanisms. First, physical activity can improve overall physical health, which in turn can improve students' ability to cope with stress. Second, physical activity can improve mood and reduce symptoms of depression and anxiety, which are risk factors for low resilience (Yusuf 2018). Third, physical activity can provide opportunities for students to develop coping skills, such as emotional regulation and problem-solving, which are essential for resilience (Gumantan 2022).

The positive relationship between physical activity and social-emotional skills suggests that physical activity can contribute to students' social-emotional development. Physical activity can provide opportunities for students to interact socially, build self-confidence, and learn to manage emotions. Participation in sports and other physical activities can help students develop skills such as teamwork, communication, and leadership, which are important components of social-emotional skills.

The positive relationship between physical fitness and resilience suggests that students with higher levels of physical fitness tend to be more resilient. Good physical fitness can provide students with the physical and mental resources necessary to cope with stress and adversity (Candra, Praira, and Denatara 2020). Physically fit students may have higher energy levels, better sleep quality, and improved cognitive function, all of which can contribute to resilience.

The positive relationship between physical fitness and social-emotional skills suggests that physical fitness can improve students' social-emotional skills. Good physical fitness can boost students' self-confidence, which in turn can improve their social-emotional well-being (Wibowo et al. 2023). Students who feel physically fit may feel more confident in their ability to interact with others, manage their emotions, and make responsible decisions.

The positive relationship between resilience and social-emotional well-being suggests that resilience and social-emotional well-being are closely interconnected. Resilience can improve students' ability to manage emotions and build positive relationships, while strong social-emotional well-being can enhance student resilience (Rahmat et al. 2024). Resilient students tend to have better social-emotional skills, such as self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.

Overall, the results of this study provide strong evidence of the importance of physical activity, physical fitness, resilience, and social-emotional well-being for high school students' well-being. These findings suggest that schools and policymakers need to prioritize programs and interventions that promote physical activity and fitness, as well as develop students' social-emotional and resilience skills.

CONCLUSION

The results of this study provide empirical evidence of a significant relationship between physical activity, physical fitness, resilience, and social-emotional well-being in

high school students. This finding aligns with previous research highlighting the importance of physical activity and physical fitness in improving various aspects of student health and well-being (Doewes and Nuryadin 2022).

The positive relationship between physical activity and physical fitness indicates that increased physical activity contributes to improved student fitness. This is consistent with previous research showing a significant relationship between physical activity and physical fitness; the higher the frequency of students' physical activity, the better their physical fitness level (Mahfud, Gumantan, and Nugroho 2020).

The positive relationship between physical activity and resilience indicates that students who are more physically active tend to be more resilient in the face of stress and adversity. This can be explained by several mechanisms. First, physical activity can improve overall physical health, which in turn can improve students' ability to cope with stress. Second, physical activity can improve mood and reduce symptoms of depression and anxiety, which are risk factors for low resilience (Yusuf 2018). Third, physical activity can provide opportunities for students to develop coping skills, such as emotional regulation and problem-solving, which are essential for resilience (Gumantan 2022).

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Overall, the results of this study provide strong evidence of the importance of physical activity, fitness, resilience, and social-emotional well-being for high school students. These findings suggest that schools and policymakers need to prioritize programs and interventions that promote physical activity and fitness, as well as develop students' social-emotional and resilient well-being.

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