

The Relationship Between Physical Fitness, Healthy Lifestyle, and Mental Health Among Students at SMP Negeri 22 Mataram

Muhammad Siswandi¹, *Baiq Satrianingsih², Ahmad Hanan³

*Corresponding Author: c, e-mail: baigsatrianingsih@undikma.ac.id

¹Physical Education and Health Study Program, Faculty of Sport, Health, and Community Sciences, Universitas Pendidikan Mandalika, Mataram, Indonesia

Abstract

Objectives: This study aimed to examine the relationship between physical fitness, healthy lifestyle, and mental health among students at SMP Negeri 22 Mataram in 2025.

Materials and Methods: This study used a quantitative correlational design. The sample consisted of 30 students selected using proportionate stratified random sampling. Physical fitness was measured using the Indonesian Student Fitness Test, while healthy lifestyle and mental health were assessed using questionnaires, including the DASS-21 for mental health indicators. Data were analyzed using descriptive statistics, Shapiro-Wilk normality test, linearity test, multicollinearity test, partial correlation, and multiple correlation analysis with IBM SPSS version 25.

Results: The results showed that most students had moderate physical fitness, moderate healthy lifestyle scores, and moderate levels of mental health problems. Partial correlation analysis showed a significant negative relationship between physical fitness and mental health problems ($r = -0.489$; $p = 0.006$). Healthy lifestyle also showed a significant negative relationship with mental health problems. Simultaneous analysis showed that physical fitness and healthy lifestyle were significantly related to students' mental health, with $R = 0.578$ and $R^2 = 0.334$.

Conclusions: Physical fitness and healthy lifestyle were significantly related to students' mental health. Better physical fitness and healthier lifestyle habits were associated with lower levels of mental health problems. These findings highlight the importance of school-based physical fitness programs, healthy lifestyle education, and mental health promotion for junior high school students.

Keywords: physical fitness; healthy lifestyle; mental health; students; physical education

Introduction

Mental health is an important component of adolescent development because it influences emotional stability, social adjustment, learning readiness, and daily functioning (Duffey et al., 2021; Pulgar et al., 2016; Yan et al., 2023). A mentally healthy student is better able to manage stress, interact positively with others, and participate productively in school activities (Fizi et al., 2023; Kuswoyo, 2018; Love et al., 2019). In adolescence, mental health becomes more vulnerable because students experience rapid biological, psychological, and social changes.

Mental health problems among adolescents have become a serious concern. The Indonesia National Adolescent Mental Health Survey reported that many Indonesian adolescents experience mental health problems, including symptoms of stress, anxiety, and depression. These conditions can affect



students' academic engagement, motivation, social relationships, and quality of life. Therefore, mental health should be considered an important concern in the school environment.

Physical fitness is one factor that may support students' mental health. Students with good physical fitness are generally able to perform daily activities without excessive fatigue. Physical fitness also supports mood regulation, self-confidence, emotional control, and psychological well-being (Nawawiwetu & Lutfiya, 2020; Ojeda-Aravena et al., 2023). Regular physical activity and fitness development may reduce stress, improve mood, and help students maintain better mental balance.

In addition to physical fitness, a healthy lifestyle also plays an important role in supporting students' mental health. A healthy lifestyle includes balanced nutrition, sufficient rest, regular physical activity, personal hygiene, environmental cleanliness, and avoidance of harmful habits. Previous studies have shown that poor lifestyle patterns, such as excessive technology use, unhealthy diet, irregular sleep, and low physical activity, may increase the risk of anxiety, stress, and depressive symptoms among adolescents.

Based on preliminary observations at SMP Negeri 22 Mataram, several students appeared easily fatigued during physical education learning. Some students also tended to consume unhealthy food and drinks after physical education classes. Informal interviews further indicated that several students experienced emotional and psychological difficulties. These conditions suggest the need to examine how physical fitness and healthy lifestyle are related to students' mental health (Flynn et al., 2017; Rachman, 2009; Verma, 2024).

Therefore, this study aimed to examine the relationship between physical fitness, healthy lifestyle, and mental health among students at SMP Negeri 22 Mataram.

Materials and Methods

Statistical Analysis

(Sugiyono, 2012) The data were analyzed using descriptive statistics. The analysis included frequency and percentage distributions for each football skill component. The results were then interpreted based on the assessment categories to determine the level of students' performance in each skill and their overall football skill level.

Study Design

This study used a quantitative correlational design. This design was selected because the study aimed to determine the relationship between physical fitness, healthy lifestyle, and mental health without providing treatment or intervention.

Study Participants



The population consisted of students at SMP Negeri 22 Mataram in 2025. The sample consisted of 30 students selected using proportionate stratified random sampling. The sample included students from grades VII, VIII, and IX.

Study Organization

Physical fitness was measured using the Indonesian Student Fitness Test, which included five test items: multistage fitness test, sit-up, standing broad jump, T-test, and hand-eye coordination test. Healthy lifestyle was measured using a healthy lifestyle questionnaire. Mental health was assessed using the Depression Anxiety Stress Scale-21, which measures symptoms of depression, anxiety, and stress.

Statistical Analysis

Data were analyzed using IBM SPSS version 25. Descriptive statistics were used to describe the mean, standard deviation, minimum score, maximum score, frequency, and percentage. The Shapiro-Wilk test was used to examine data normality. Linearity and multicollinearity tests were conducted before correlation analysis. Partial correlation was used to examine the relationship between each independent variable and mental health. Multiple correlation analysis was used to examine the simultaneous relationship between physical fitness, healthy lifestyle, and mental health. The significance level was set at $p < 0.05$.

Results

Descriptive Statistics

Table 1. Descriptive Statistics of Research Variables

Variable		Minimum	Maximum	Mean	SD
Physical Fitness	30	7	18	12.47	3.33
Healthy Lifestyle	30	51	10	83.30	12.42
Mental Health Problems	30	8	45	23.03	8.43

The descriptive results showed that students' physical fitness had a mean score of 12.47, indicating that most students were in the moderate category. The mean healthy lifestyle score was 83.30, also indicating a moderate category. The mean mental health problem score was 23.03, showing that students generally experienced mental health problems at a moderate level.



Distribution of Physical Fitness

Table 2. Distribution of Physical Fitness Levels

Category	Frequency	Percentage
Low	8	27%
Moderate	17	56%
High	5	17%

Most students had moderate physical fitness. A total of 17 students, or 56%, were in the moderate category.

Distribution of Healthy Lifestyle

Table 3. Distribution of Healthy Lifestyle Levels

Category	Frequency	Percentage
Low	6	20%
Moderate	20	67%
High	4	13%

Most students had a moderate healthy lifestyle. A total of 20 students, or 67%, were in the moderate category.

Distribution of Mental Health Problems

Table 4. Distribution of Mental Health Problem Levels

Category	Frequency	Percentage
Low	4	13%
Moderate	23	77%
High	3	10%

Most students were in the moderate category of mental health problems, with 23 students or 77% included in this category.

Assumption Testing

The Shapiro-Wilk normality test showed that physical fitness ($p = 0.077$), healthy lifestyle ($p = 0.080$), and mental health ($p = 0.065$) were normally distributed. The linearity test showed that the relationship between physical fitness and mental health was linear, with a deviation from linearity value of 0.385. The relationship between healthy lifestyle and mental health was also linear, with a deviation from linearity value of 0.140. The multicollinearity test showed tolerance values of 0.979 and VIF values



of 1.022 for both independent variables, indicating no multicollinearity problem.

Partial Correlation Analysis

Table 5. Partial Correlation Results

Relationship	r	P-value	Interpretation
Physical Fitness and Mental Health Problems	-0.489	0.006	Significant, moderate negative relationship
Healthy Lifestyle and Mental Health Problems	Negative	< 0.05	Significant negative relationship

The partial correlation analysis showed a significant negative relationship between physical fitness and mental health problems. This means that students with better physical fitness tended to have lower levels of mental health problems. Healthy lifestyle also showed a significant negative relationship with mental health problems, indicating that healthier lifestyle habits were associated with better mental health conditions.

Multiple Correlation Analysis

The multiple correlation analysis showed that physical fitness and healthy lifestyle were significantly related to mental health problems simultaneously. The multiple correlation coefficient was $R = 0.578$, with $R^2 = 0.334$. This means that 33.4% of the variation in students' mental health problems could be explained by physical fitness and healthy lifestyle, while the remaining 66.6% was influenced by other factors outside this study.

Discussion

The findings of this study showed that most students at SMP Negeri 22 Mataram had moderate levels of physical fitness, healthy lifestyle, and mental health problems. This indicates that students were not in a poor condition overall, but their physical and lifestyle conditions still need improvement. Moderate mental health problem scores also suggest that students may still experience symptoms related to stress, anxiety, or emotional instability.

The significant negative relationship between physical fitness and mental health problems indicates that better physical fitness is associated with lower psychological distress. Students with better fitness are more likely to have better endurance, lower fatigue, and greater readiness to participate in school activities. This finding supports previous research by Yoisingadji (2024), which found that



physical activity had a positive effect on students' mental health. It is also consistent with Cadenas-Sanchez et al. (2021), who emphasized the important role of physical fitness in psychological well-being.

The relationship between physical fitness and mental health may be explained by the physiological and psychological effects of physical activity. Regular physical activity can improve mood, reduce stress, and support emotional regulation. Students who are physically fit may also have better self-confidence and stronger motivation to engage in learning activities. This is in line with Putranto and Efendi (2024), who stated that physical fitness supports physical endurance, mental vitality, and overall well-being.

Healthy lifestyle was also significantly related to mental health problems. This finding shows that students who practice healthier daily habits tend to have fewer mental health problems. A healthy lifestyle, including adequate rest, balanced nutrition, hygiene, regular exercise, and positive social habits, can support both physical and psychological well-being. This result is consistent with Pratiwi and Djuwita (2022), who found that lifestyle was significantly related to adolescent mental health in Indonesia.

The present finding is also supported by Ramdani et al. (2024), who stated that regular exercise and healthy lifestyle practices can improve mood, reduce stress, and support psychological well-being. Similarly, Shalahuddin and Irsyadi (2023) explained that unhealthy modern lifestyle patterns, such as excessive technology use, irregular sleep, poor diet, and unhealthy habits, may increase the risk of anxiety and depression among adolescents.

The simultaneous analysis showed that physical fitness and healthy lifestyle together explained 33.4% of the variation in students' mental health problems. This result indicates that both variables are important, but they are not the only factors that influence mental health. Other factors such as family support, academic pressure, peer relationships, social environment, sleep quality, self-esteem, and school climate may also contribute to students' mental health.

Overall, the findings suggest that mental health promotion in schools should not only focus on counseling services but also include physical education, fitness development, and healthy lifestyle education. Schools can design regular physical activity programs, provide education on balanced nutrition and rest, and create a supportive environment that helps students maintain both physical and mental well-being.

Conclusions

This study concluded that physical fitness and healthy lifestyle were significantly related to mental health among students at SMP Negeri 22 Mataram. Physical fitness had a significant negative



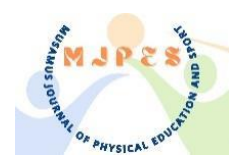
relationship with mental health problems, meaning that students with better physical fitness tended to experience fewer mental health problems.

Healthy lifestyle also showed a significant negative relationship with mental health problems. Students with healthier daily habits tended to have better mental health conditions. Simultaneously, physical fitness and healthy lifestyle contributed 33.4% to students' mental health problems.

These findings highlight the importance of strengthening school-based physical fitness programs, healthy lifestyle education, and mental health promotion. Future studies are recommended to involve larger samples and include other variables such as sleep quality, family support, academic stress, peer relationships, and screen time.

References

- Duffey, K., Barbosa, A., Whiting, S., Mendes, R., Yordi Aguirre, I., Tcymbal, A., Abu-Omar, K., Gelius, P., & Breda, J. (2021). Barriers and Facilitators of Physical Activity Participation in Adolescent Girls: A Systematic Review of Systematic Reviews. *Frontiers in Public Health*, 9, 743935. <https://doi.org/10.3389/fpubh.2021.743935>
- Fizi, R. M., Winarni, S., Guntur, & Hartanto, A. (2023). A game model in physical education to improve motor skills, cooperation, and discipline of primary school learners. *Pedagogy of Physical Culture and Sports*, 27(6), 448–455. <https://doi.org/10.15561/26649837.2023.0602>
- Flynn, S., Vereenoghe, L., Hastings, R. P., Adams, D., Cooper, S.-A., Gore, N., Hatton, C., Hood, K., Jahoda, A., Langdon, P. E., McNamara, R., Oliver, C., Roy, A., Totsika, V., & Waite, J. (2017). Measurement tools for mental health problems and mental well-being in people with severe or profound intellectual disabilities: A systematic review. *Clinical Psychology Review*, 57, 32–44. <https://doi.org/10.1016/j.cpr.2017.08.006>
- Kuswoyo, D. D. (2018). Identifikasi Tingkat Keterampilan Sepak Bola Siswa Putra Kelas V SDN Monta Kecamatan Monta Kabupaten Bima Tahun Ajaran 2018-2019. *Jurnal Ilmu Keolahragaan*, 17(2), 6–10. <https://jurnal.unimed.ac.id/2012/index.php/JIK/article/view/12297>
- Love, R., Adams, J., & Van Sluijs, E. M. F. (2019). Are school-based physical activity interventions effective and equitable? A meta-analysis of cluster randomized controlled trials with accelerometer-assessed activity. *Obesity Reviews*, 20(6), 859–870. <https://doi.org/10.1111/obr.12823>
- Nawawiwetu, E. D., & Lutfiya, I. (2020). Factors Associated With the Ability To Perform Physical Fitness Tests With Qcst. *Journal of Vocational Health Studies*, 3(3), 97. <https://doi.org/10.20473/jvhs.v3.i3.2020.97-102>
- Ojeda-Aravena, A., Herrera-Valenzuela, T., Valdés-Badilla, P., Báez-San Martín, E., Thapa, R. K., & Ramirez-Campillo, R. (2023). A Systematic Review with Meta-Analysis on the Effects of Plyometric-Jump Training on the Physical Fitness of Combat Sport Athletes. *Sports*, 11(2), 33. <https://doi.org/10.3390/sports11020033>
- Pulgar, C. A., Trejo, G., Suerken, C., Ip, E. H., Arcury, T. A., & Quandt, S. A. (2016). Economic



- Hardship and Depression Among Women in Latino Farmworker Families. *Journal of Immigrant and Minority Health*, 18(3), 497–504. <https://doi.org/10.1007/s10903-015-0229-6>
- Rachman, O. H. A. (2009). *Dimensi Kecakapan Hidup (Life Skill) Dalam Pembelajaran Pendidikan Jasmani*. 6.
- Sugiyono. (2012). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. CV. Alfabeta.
- Verma, N. (2024). *Exploring mental ill-health stigma in sport: A social identity approach* [Thesis, Heriot-Watt University]. <https://www.ros.hw.ac.uk/handle/10399/5141>
- Yan, J., Jones, B., Smith, J. J., Morgan, P., & Eather, N. (2023). A Systematic Review Investigating the Effects of Implementing Game-Based Approaches in School-Based Physical Education Among Primary School Children. *Journal of Teaching in Physical Education*, 42(3), 573–586. <https://doi.org/10.1123/jtpe.2021-0279>