i-Core: Indonesian Journal of Sport Science

Volume 2 Issue 1 (2026)

https://jurnal.stokbinaguna.ac.id/index.php/i-Core

Enhancing Physical Performance, Stress Reduction, and Quality of Life through Regular Exercise: A Systematic Literature Review

Zaitun Fatimatuz Zahra [1] *, Amung Ma'mun [2], Syarifatunnisa [3]
[1 2 3] Universitas Pendidikan Indonesia, West Java, Indonesia
* Corresponding Author: zaitunfatimatuzz@gmail.com

Abstract: This study aims to analyze the various positive effects of regular exercise on physical and mental health using the Systematic Literature Review (SLR) method. In the context of futsal athletes, morning runs have been shown to increase VO2Max and improve mental and physical health, which are crucial for supporting their performance on the field. Among students at the Jakarta III Ministry of Health Polytechnic (Poltekes Kemenkes), the habit of exercising is closely linked to reduced stress levels, while for students at MTsN 1 Kepulauan Sula, physical activity plays a key role in improving their mental health. During the COVID-19 pandemic, this study also revealed that physical activity served as a balancing factor that helped adolescents maintain their mental health amid a highly stressful situation. Overall, this study highlights the importance of exercise in improving physical fitness and mental health, which contributes to a better quality of life across various age groups and professions.
Keywords: Physical Activity, Psychological Well-Being, Cardiorespiratory Fitness, Systematic Literature Review, Sport Science

Introduction

Health is an important factor that influences various aspects of life. According to the World Health Organization (WHO), mental health is a state of overall well-being in which individuals can effectively manage the pressures and challenges of daily life while recognizing and striving to achieve their personal potential. A person can be considered mentally healthy when they are able to manage stress, adapt well, work productively, and contribute to their environment. Meanwhile, the American Psychological Association (APA), the world's largest psychological association, states that mental health is the primary foundation for feeling, communicating, learning, thinking, and functioning effectively (Silvana Galderisi, 2024).

Giriwijoyo (2013) describes physical exercise as a series of planned, purposeful, and systematically performed physical movements that individuals engage in intentionally to improve their functional capacity and overall health. As highlighted by Jane Ruseki (2014) in Rosa et al. (2022), regular engagement in physical activity or exercise can significantly reduce the likelihood of developing chronic diseases, alleviate stress and symptoms of depression, enhance emotional stability, increase energy levels,

Copyright © 2026
Zaitun Fatimatuz Zahra – Amung Ma'mun – Syarifatunnisa

boost self-esteem, and enhance satisfaction derived from social interactions. Consistent and routine physical exercise not only contributes to improved physical fitness but also has a profound positive impact on mental and emotional health, fostering resilience and better cognitive well-being.

Engaging in physical exercise is widely recognized as one of the most effective strategies for individuals to relieve stress, providing both immediate and long-term psychological benefits (Sukadiyanto, 2010) (Sukadiyanto, 2010). During physical activity, the brain releases endorphins, which act as natural mood stabilizers by counteracting stress-related hormones. On the other hand, individuals who rarely participate in physical exercise often exhibit higher stress levels, primarily due to increased cortisol production (Stevens et al., 2013). Exercise is an essential part of life for maintaining both physical and mental health.

Individuals who actively participate in sports or engage in regular physical activity experience improved emotional well-being and a positive mood (Rebar et al., 2015). Craft (2004) also explains that exercise leads to increased self-confidence, improved sleep quality, and reduced stress levels. Engaging in moderate to vigorous physical activity has been shown to be highly effective in alleviating anxiety symptoms and improving overall emotional stability (Pascoe et al., 2020).

Based on the above explanation, mental health disorders can be managed through exercise. In addition to exercise, maintaining a healthy lifestyle, such as consuming a balanced, nutrient-rich diet and ensuring adequate sleep, can significantly contribute to the prevention of mental health challenges and the enhancement of psychological resilience. Taking time to practice self-care by cultivating positive thoughts and participating in enjoyable and calming activities is an important step toward maintaining mental health and achieving emotional balance. This study aims to provide a deeper understanding of how exercise affects mental health by critically examining and synthesizing findings from various scientific studies on the subject.

Method

This study adopts a Systematic Literature Review (SLR) approach, a methodology that involves the systematic review and analysis of previous research findings related to a specific topic or phenomenon of interest, to ensure a comprehensive evaluation (Barbara Kitchenham, 2014). The SLR process involves identifying and selecting publications that meet predefined eligibility criteria while adhering to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. When applying this method, researchers must be selective in choosing journals to ensure they align with the specified parameters. The purpose of using PRISMA is to enhance transparency in research and improve the quality and credibility of the results of systematic reviews or meta-analyses.

To search for scientific literature, this study utilized Google Scholar, a platform that enables the search for various scientific articles and journals in diverse publication formats (Rafika et al., 2017). In the first screening stage, the researchers classified the identified literature based on systematic categories. At this stage, the abstracts and conclusions of each study were used to determine which documents were suitable for further review. Next, during the eligibility stage, the authors re-evaluated the identified documents by considering criteria related to methodological soundness and topic relevance and filtered out irrelevant documents. Articles that underwent a thorough evaluation but failed to meet the criteria for a systematic review were excluded from further consideration to maintain the integrity and focus of the analysis. This study employed three primary selection criteria: publication within the last ten years (2015–2025), articles that were not literature reviews, and articles written in Indonesian.

Results & Discussion

Results

After conducting an identification process using PRISMA, 13 out of 24 articles were found to be relevant to the role of sports in adolescent mental health. The identification process was based on criteria defined from various relevant journal publications. The selection criteria included articles found on Google Scholar, encompassing research papers written in Indonesian and published over the past decade, specifically between 2015 and 2025, to capture current trends and findings. The journals used include Journal of Innovation and Community Service; Journal of Health Science and Technology; Journal of Religion and Science; Malahayati Nursing Journal; and Sporta Saintika.

Table 3. Selected Articles

No.	Title, Author, & Year	Results
1	The Benefits of Morning Running on VO2Max, Mental Health, and Physical Health in Futsal Athletes Suryansah, Hariadi & Rina Nopiana (2023)	This study revealed a significant effect of morning running on the improvement of VO2Max among futsal players at Club Surabaya Sakti. The results of the statistical test showed an observed t-value of 8.8880, which is higher than the critical t-value of 2.069 at a significance level (Sig.) of 5%. This indicates that morning jogging has a clear positive impact on increasing VO2Max, as well as improving the athletes' physical and mental condition, as evidenced by an average increase of 28.1 in pre-test and post-test scores following the implementation of the jogging program.
2	Exercise Habits Affect Stress Levels Among Students at the Jakarta III Ministry of Health Polytechnic of Health Sciences Ricca Andalasari & Abdurahman Berbudi BL (2024)	The results of this study show that exercise habits have a strong and significant association with stress levels. A p-value of <0.05 was found, indicating that regular exercise can help reduce a person's stress levels. This suggests that exercise is an effective way to manage stress psychologically.
3	The Effect of Physical Activity on the Mental Health of Ninth-Grade Students at MTsN 1 Kepulauan Sula Arifin Yoisangadji (2024)	The research methods used in this study included surveys, interviews, and active measurements of physical activity and mental health. The study revealed that students who consistently engaged in physical activity three to five times per week tended to have lower levels of depression, anxiety, and stress compared to students who were less active. This study also noted barriers such as a lack of sports facilities and personal motivation, but supportive factors such as encouragement from teachers and family were found to be helpful. The study highlights the importance of integrating physical activity into students' daily lives to strengthen their mental well-being.
4	The Relationship Between Physical Activity and Adolescents' Mental Health During the COVID-19 Pandemic Farahdina Bachtiar, Condrowati, Purnamadyawati, Diah Tika Anggraeni, Khaerunissa Iarasati, Alya Sukma Bakti Meilana, & Nur Fadila (2023)	This study shows a significant association between physical activity and gender (p=0.001). However, no significant association was found between physical activity and adolescents' mental health (p>0.05). The majority of respondents tended to engage in light-intensity physical activity, and some of them still experienced stress, anxiety, and depression, indicating that other

		factors also play a role in adolescents' mental health.
5	Physical Activity: Does It Affect Physical Fitness and Mental Health? Ahmad Chaeroni, Nurlan Kusmaedi, Amung Ma'mun, & Dian Budiana (2021)	The method used was the Indonesian Physical Fitness Test (TKJI). This study confirmed that physical activity at moderate to high intensity can maximize adolescents' physical fitness and emotional health. In conclusion, consistently engaging in moderate- to high-intensity exercise should be part of adolescents' lifestyles to maintain a balance between their physical and mental health.

Discussion

Suryansah, Hariadi, and Nopiana (2023) conducted an experimental study using a pretest-posttest design to examine the effects of morning walks on VO2Max levels and the mental and physical health of futsal players at the Sakti Surabaya Club. The results showed a significant effect of morning runs, as evidenced by a t-statistic value of 8.8880, which exceeded the critical t-value of 2.069 at the 5% significance level (Sig.), indicating strong statistical significance. This indicates that morning jogging can increase VO2Max and have a positive effect on athletes' physical and mental condition. This is supported by an average increase in VO2Max of 28.1 between the pre-test and post-test after participants adhered to the prescribed walking program. This study provides evidence that regular exercise, such as morning jogging, offers significant benefits to athletes in terms of physical fitness and mental stability.

A study conducted by Ricca Andalasari and Abdurahman Berbudi BL (2024) used a cross-sectional research design to investigate the relationship between exercise habits and stress levels among students at Poltekes Kemenkes Jakarta III, revealing a strong and statistically significant correlation, with a p-value below 0.05. This study indicates that regular exercise can play a role in reducing stress, help manage the psychological pressures frequently experienced by students, and provide benefits in reducing anxiety. Thus, exercise is an effective strategy for managing stress and maintaining students' mental health.

A study by Arifin Yoisangadji (2024) used surveys, interviews, and measurements of physical activity and mental health to analyze the impact of physical activity on the mental health of students at MTsN 1 Kepulauan Sula. The results showed that students who engaged in physical activity three to five times a week experienced a significant reduction in symptoms of depression, anxiety, and overall stress levels. However, this study also identified several barriers, such as limited sports facilities and students' personal motivation, as well as supporting factors, such as support from teachers and families, that help increase student participation in physical activity. This study emphasizes the importance of incorporating physical exercise into students' daily schedules to help them maintain mental well-being and effectively manage academic stress.

In a study conducted by Farahdina Bachtiar and colleagues (2023) during the COVID-19 pandemic, the researchers adopted a quantitative correlational approach using a cross-sectional framework to examine the relationship between physical activity and mental health outcomes among adolescents. The study's findings revealed a strong statistical association between physical activity and gender ($p = 0.001$); however, no significant correlation was found between physical activity and adolescents' mental health ($p > 0.05$). Although most participants engaged in moderate-intensity exercise, many reported feelings of stress and anxiety, suggesting that external factors, such as

psychological and social disruptions caused by the pandemic, also significantly influenced their mental health. Therefore, other factors need to be considered in efforts to support adolescents' mental well-being.

A study by Ahmad Chaeroni and colleagues (2021) used an experimental method with the Indonesian Physical Fitness Test (TKJI) to explore the impact of physical activity on adolescents' physical fitness and mental well-being, showing that moderate-to-vigorous physical activity not only improves physical health but also enhances psychological resilience and emotional stability. This physical activity has been shown to provide benefits in improving endurance, muscle strength, and heart function, as well as helping to reduce symptoms of anxiety and depression. The study concluded that to maintain both physical and mental health, adolescents need to make moderate- to high-intensity physical activity a part of their lifestyle.

Conclusion

Based on the literature review presented, it can be concluded that physical activity, such as jogging and other types of exercise, has a significant positive impact on physical fitness and mental health. People who engage in physical activity regularly tend to experience improvements in physical capacity, such as VO2Max, and report significantly lower levels of stress, anxiety, and feelings of sadness. Exercise can stimulate the release of hormones associated with feelings of happiness, such as endorphins. In addition, a healthy lifestyle that includes adequate sleep and a nutritious diet also plays an important role in supporting overall mental health.

References

Barbara Kitchenham. (2014). Procedures for Performing Systematic Reviews. *Keele University Technical Report*, *33*(2004), 1–26. https://www.researchgate.net/publication/228756057

Craft, L. L. F. M. F. (2004). *Statement, Accreditation Press, Physicians Postgraduate Designation, Credit Press, Physicians Postgraduate Objective, Educational*.

Giriwijoyo, S. (2013). Ilmu Kesehatan Olahraga, Untuk Kesehatan Dan Prestasi Olahraga. *Bandung : Fakultas Pendidikan Olahraga Dan Kesehatan UPI.*, *66*, pp.13-78.

Pascoe, M., Bailey, A. P., Craike, M., Carter, T., Patten, R., Stepto, N., & Parker, A. (2020). Physical activity and exercise in youth mental health promotion: A scoping review. *BMJ Open Sport and Exercise Medicine*, *6*(1), 1–11. https://doi.org/10.1136/bmjsem-2019-000677

Rafika, A. S., Putri, H. Y., & Widiarti, F. D. (2017). Analisis Mesin Pencarian Google Scholar Sebagai Sumber Baru Untuk Kutipan. *Journal CERITA*, *3*(2), 193–205. https://doi.org/10.33050/cerita.v3i2.657

Rebar, A. L., Stanton, R., Geard, D., Short, C., Duncan, M. J., & Vandelanotte, C. (2015). A meta-meta-analysis of the effect of physical activity on depression and anxiety in non-clinical adult populations. *Health Psychology Review*, *9*(3), 366–378. https://doi.org/10.1080/17437199.2015.1022901

Rosa, Y. N., Jubaedi, A., Siswoyo, J., & Sulistianta, H. (2022). *The Relationship Of Eye Coordination And Confidence Towards The Results Of Three Point Shot In Basketball Games In Extracurricular Boss Students Of Basketball SMAN 1 Tumijajar Regency Of Tulang Bawang Barat*.

Silvana Galderisi. (2024). *The need for a consensual definition of mental health*. https://pmc.ncbi.nlm.nih.gov/articles/PMC10785984/

Stevens, R. E., Loudon, D. L., Yow, D. A., Bowden, W. W., & Humphrey, J. H. (2013). Stress in College Athletics. In *Stress in College Athletics*. https://doi.org/10.4324/9781315043593

Sukadiyanto, S. (2010). Stress Dan Cara Menguranginya. *Jurnal Cakrawala Pendidikan*, *1*(1), 55–66. https://doi.org/10.21831/cp.v1i1.218

Suryansah, Hariadi, & Nopiana, R. (2023). Manfaat Olahraga Lari Pagi Terhadap VO2Max, Kesehatan Mental dan Fisik Atlet Futsal. *AL-Tafani: Jurnal Inovasi Dan Pengabdian Kepada Masyarakat*, *1*(1), 8–16. https://ejournal.lembagaeinsteincollege.com/AL-TAFANI/article/view/7