



Mindfulness Exercises: A Key to Reducing Stress in Adult Volleyball Athletes

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Abstract

Adult volleyball athletes often experience high pressure from both internal and external sources. This causes adult athletes to be prone to prolonged stress. If not treated immediately, this can cause them difficulty in achieving their maximum performance. This study aims to examine the effect of mindfulness training in reducing stress in adult volleyball athletes. This study used a quantitative approach with an experimental method involving 8 adult male volleyball athletes aged 17-25 years in Bandung Regency. The instrument used was the Perceived Stress Scale (PSS 10) questionnaire, which was administered before and after the mindfulness training treatment. The results showed that mindfulness training significantly reduced stress levels in adult volleyball athletes. The results of this study showed a significance value of 0.00, which is smaller than 0.05. In conclusion, mindfulness training has been shown to reduce stress among adult volleyball athletes and can serve as a reference for psychological training programs during daily training to help manage stress.

How to Cite

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INTRODUCTION

In volleyball, especially among adult athletes, stress is often experienced before and during competitions (Lestari et al., 2022). Stress occurs due to high pressure when athletes must maintain their best performance amid the demands of age, expectations of results, and high mental burdens. This condition makes adult volleyball athletes prone to prolonged stress (Komarudin, 2016). Stress is a condition characterized by an individual's physiological and psychological responses to perceived pressure or demands (Febri, 2024; Marliani et al., 2020). If stress is not managed correctly, concentration, decision-making, and physical coordination can be disrupted, leading to a decline in performance (Gaillard, 2018). Therefore, a psychological approach in athlete training is increasingly needed to support mental, technical, and physical balance simultaneously (Schinke et al., 2018).

Mindfulness training is a psychological exercise that encourages individuals to be fully aware of the present moment, accepting thoughts, feelings, and bodily sensations without judgment (Fauzan et al., 2022; Hijah et al., 2025). Mindfulness exercises have been proven effective in reducing stress, improving emotional regulation, and enhancing focus and mental resilience across various groups, including athletes in sports such as basketball and athletics (Dagnall et al., 2021; Wang et al., 2023). The treatment to be provided in this study is a structured mindfulness exercise program consisting of eight sessions over a period of four weeks, with a frequency of twice a week. Each session lasts 30–40 minutes, beginning with mindful breathing exercises, followed by body scan meditation to increase awareness of bodily sensations, and exercises in observing thoughts and emotions without judgment. This exercise refers to the protocol in (Zsofia et al., 2021). With consistent application, the implementation of mindfulness exercises is expected to contribute to overcoming stress among athletes, especially adult volleyball players.

Based on a survey conducted through direct field interviews with the author, several male volleyball athletes aged 17-25 years reported experiencing stress. This stress occurred due to many demands, including the need to maintain their best performance amid age-related demands, expectations for results, and the high mental burden of thinking about the future (Udiani & Hidayat, 2025). This makes athletes prone to prolonged stress. If stress is not managed effectively, athletes may have difficulty achieving their maximum

performance (Nugroho, A., & Sari, 2020). Therefore, the author will conduct Mindfulness training interventions to help athletes overcome and manage the stress they experience.

Based on previous research conducted by (Puriana et al., 2024) entitled "The Effectiveness of Mindfulness Programs and Mental Skills Training in Managing Stress and Competitive Anxiety in Professional Athletes" examined the effects of mindfulness programs and mental skills training on reducing stress and anxiety in professional athletes. This study involved 60 athletes aged 18-30 years from various sports, including athletics, badminton, and soccer. The athletes were divided into three groups: the mindfulness group, the mental skills training group, and a combined group. The results showed that the mindfulness group reduced stress by 18 points, while the combined group performed better, reducing stress by 31 points and anxiety by 40 points. The mindfulness program consisted of 8 sessions over four weeks, focusing on meditation and breathing exercises.

Based on the background above, the author formulated the following research question: "Is there a significant effect of mindfulness training on reducing stress in volleyball athletes?"

Based on the background above, the author is interested in conducting a research study titled "The Effect of Mindfulness Training on Stress Reduction in Volleyball Athletes." The research problem formulation in this study is, "Is there a significant effect of mindfulness training on stress reduction in volleyball athletes?"

This study offers novelties in its specific focus on adult male volleyball athletes, the use of a more structured mindfulness protocol, the testing of the sole effect of mindfulness without combining it with mental skills training, the use of the PSS-10 in a volleyball athlete population, and new contributions to understanding the effects of mindfulness on stress in team sports athletes. This has not been specifically studied in previous studies, namely Puriana et al. (2024), who tested the effectiveness of mindfulness in various sports and combined it with mental skills training.

METHODS

This study uses a quantitative approach, adopting (Sugiyono, 2020). experimental method. It uses a one-group pretest-posttest design involving male athletes aged 17-25 years in a volleyball club in Bandung Regency. The athletes will be given an instrument in the form of a Perceived Stress Scale (PSS-10) questionnaire,

adopted from (Cohen et al., 2019) and used by (Hakim et al., 2024), to collect pretest data, followed by a 4-week mindfulness training program. After that, the questionnaire will be given again to the athletes to collect data. The collected data will then be processed using SPSS 25.

The mindfulness program in this study was implemented in eight sessions over four weeks, progressing from conceptual introduction to integrative training. In the first session, athletes were introduced to the basic concepts of mindfulness and its benefits for stress management. The second session included focused breathing exercises to train concentration and foster calm. The third session focused on body scans to increase body awareness and help release muscle tension. In contrast, the fourth session taught non-judgmental observation of negative thoughts, enabling athletes to manage disruptive self-talk. In the fifth session, athletes practiced observing negative emotions such as anxiety, anger, or frustration through awareness of the physical sensations that accompany those emotions. The sixth session integrated mindfulness after physical exercise and volleyball techniques to enhance recovery and body awareness after intense activity. The seventh session combined all techniques—breathing, body scans, mindfulness, and emotion observation—into one comprehensive training session. The program concluded in the eighth session with a combined training and evaluation session, focusing on participants' experiences, including reflections on the benefits, perceived changes, and continued application of mindfulness in training and daily life.

The mindfulness program was implemented by placing the athlete in a comfortable sitting position with a straight back and eyes closed or half-closed. The author then provided verbal instructions slowly to direct the athlete's attention to their breath, bodily sensations, thoughts, and emotions, according to the focus of each session. In the breathing exercise, the athlete was asked to observe the natural flow of breath in and out without changing the rhythm; in the body scan, the athlete was directed to gradually shift their attention from head to toe to recognize bodily sensations without judgment; in the mind and emotion observation session, the athlete was asked to be aware of the emergence of negative thoughts or feelings like a passing wind, observing them without rejecting or following them, while returning to their breath when their attention wandered. In the integration session for volleyball technical and physical training, the athlete was asked to pay attention to their heart rate, muscle fatigue,

and bodily sensations after training while maintaining full awareness without judgment. Each session lasted 15–30 minutes, beginning with opening instructions to calm the body and ending with a deep breath, returning awareness to the room, and a brief reflection on the training experience. All processes were carried out calmly, purposefully, and consistently so that the athlete could gradually develop focus, relaxation, and emotional regulation.

RESULTS AND DISCUSSION

The data obtained were then analyzed using SPSS 25. The following are the results of the data processing that has been carried out:

Based on Statistic Descriptive Test, which presents the statistical test results, the standard deviation for the pretest was 2.387, and for the posttest, 2.375.

Based on Normality Test, which shows the results of the Shapiro-Wilk normality test, the significance values for the pretest and posttest were 0.90 and 0.75, respectively. Therefore, the data are typically distributed.

Based on Paired Sample Test, which shows that mindfulness training has a significant effect on reducing stress in volleyball athletes. A significance value of 0.00, which is less than 0.05, proves that H_0 is rejected and H_1 is accepted. The mindfulness training procedure, which teaches focus on the present moment, has been proven effective in reducing stress. Mindful breathing exercises activate the parasympathetic nervous system, body scans increase body awareness, and mind observation helps prevent negative thought patterns. Therefore, the hypothesis "There is a Significant Effect of Mindfulness Training on Reducing Stress in Volleyball Athletes" is accepted and proven empirically.

The decrease in stress scores from an average of 20.62 to 16.25 indicates that Mindfulness training is effective in reducing stress levels in adult volleyball athletes. These results align with (Kabat-Zinn, 2023) theory, which states that mindfulness helps individuals shift from a reactive mindset to a responsive mindset through non-judgmental present-moment awareness. When athletes learn to be aware of bodily sensations, emotions, and thoughts without judgment, the parasympathetic nervous system becomes more dominant, reducing the physiological stress response. This aligns with the effects reported by athletes in this study, namely increased relaxation and decreased muscle tension after mindful

breathing and body scans.

Psychologically, the results of this study support the theory of emotion regulation, which states that mindfulness improves an individual's ability to observe internal experiences without getting caught up in negative thought patterns. According to (Dagnall et al., 2021) and (Wang et al., 2023), mindfulness can break the automatic chain of negative thoughts that often trigger performance stress in athletes. In the context of this study, adult soccer athletes reported decreases in overthinking, fear of being wrong, and anxiety about coach judgment. These findings indicate that mindfulness works according to its theoretical mechanisms, namely increasing self-awareness and acceptance of experiences, which ultimately reduces competitive stress.

The results of this study are also consistent with previous findings by (Puriana et al., 2024), which showed that mindfulness can reduce stress among athletes across various sports. This study strengthens this theory in a more specific context: adult volleyball athletes who face stress, pressure, and team dynamics. The significant reduction in stress in this group indicates that the theory of mindfulness effectiveness applies not only to individual athletes but also to team sports with complex situational pressures. Thus, this study not only supports existing theories but also extends their application to adult volleyball athletes.

CONCLUSION

It can be concluded that mindfulness training has been proven to help reduce stress in adult volleyball players by fostering full awareness of past events without judgment, allowing individuals to focus on the current situation without being distracted by the past or external factors that can cause stress. Mindfulness training can also serve as a reference point among the psychological exercises in athletes' daily training programs, helping them manage stress.

REFERENCES

- Arif Rahman Hakim¹, Linda Mora¹, Citra Hati Leo-metal¹, C. P. D. (2024). Psychometric Properties Of The Perceived Stress Scale (PSS-10) In Indonesian Version.
- Cohen, S., Murphy, M. L. M., & Prather, A. A. (2019). Ten Surprising Facts about Stressful Life Events and Disease Risk. *Annual Review of Psychology*, 70(June 2018), 577–597. <https://doi.org/10.1146/annurev-psych-010418-102857>
- Dagnall, N., Drinkwater, K. G., Denovan, A., & Walsh, R. S. (2021). The potential benefits of non-skills training (mental toughness) for elite athletes: Coping with the negative psychological effects of the COVID-19 pandemic. *Frontiers in Sports and Active Living*, 3, 581431.
- Fauzan, H. A., Komarudin, K., Tafaqur, M., & Novian, G. (2022). Meningkatkan Kepercayaan Diri dan Hasil Pukulan Dropshot Melalui Latihan Self-Talk pada Cabang Olahraga Bulutangkis. *Journal of Sport Coaching and Physical Education*, 6(2), 121–139. <https://doi.org/10.15294/jspe.v6i2.51640>
- Febri, H. (2024). Stres No More: Strategi Efektif Mengelola Stres di Tengah Kehidupan Digital. *Coram Mundo: Jurnal Teologi Dan Pendidikan Agama Kristen*, 6(2), 54–71.
- Gaillard, A. W. K. (2018). Concentration, stress and performance. In *Performance under stress* (pp. 75–92). CRC Press.
- Hijah, Q. N., Komarudin, K., Saputra, M. Y., & Novian, G. (2025). Mindfulness Meditation Intervention: A Way to Reduce Stress in Junior Volleyball Athletes. *Indonesian Journal of Physical Education and Sport Science*, 5(2), 234–242.
- Kabat-Zinn, J. (2023). *Wherever you go, there you are: Mindfulness meditation in everyday life*. Hachette UK.
- Komarudin. (2016). *Psikologi Olahrag*. PT. Remaja Rosdakarya.
- Lestari, R., Windarwati, H. D., Setyawan, F. E. B., & Hidayah, R. (2022). Stres, resiliensi, dan tata laksana masalah kesehatan jiwa tenaga kerja setelah pandemi covid-19. Universitas Brawijaya Press. [https://books.google.com/books?hl=id&lr=&id=fb21EAAAQBAJ&oi=fnd&pg=PP1&dq=Lestari,+R.,+Windarwati,+H.+D.,+Setyawan,+F.+E.+B.,+%26+Hidayah,+R.+\(2022\).+Stres,+resiliensi,+dan+tata+laksana+masalah+kesehatan+jiwa+tenaga+kerja+setelah+pandemi+covid-19.+Univers](https://books.google.com/books?hl=id&lr=&id=fb21EAAAQBAJ&oi=fnd&pg=PP1&dq=Lestari,+R.,+Windarwati,+H.+D.,+Setyawan,+F.+E.+B.,+%26+Hidayah,+R.+(2022).+Stres,+resiliensi,+dan+tata+laksana+masalah+kesehatan+jiwa+tenaga+kerja+setelah+pandemi+covid-19.+Univers)
- Marliani, R., Nasrudin, E., Rahmawati, R., & Ramdani, Z. (2020). Regulasi emosi, stres, dan kesejahteraan psikologis: Studi pada ibu work from home dalam menghadapi pandemi COVID-19. *Karya Tulis Ilmiah LP2M UIN SGD Bandung*.
- Nugroho, A., & Sari, R. (2020). Peran kepercayaan diri dalam mencapai keberhasilan individu. *Jurnal Kesejahteraan Sosial*.
- Puriana, R. H., Harvianto, Y., & Anam, C. (2024). Efektivitas Program Mindfulness Dan Pelatihan Mental Skill Dalam Mengelola Stres Dan Kecemasan Kompetitif Pada Atlet Profesional. 187–194.
- Schinke, R. J., Stambulova, N. B., Si, G., & Moore, Z. (2018). International society of sport psychology position stand: Athletes' mental health, performance, and development. *International Journal of Sport and Exercise Psychology*, 16(6), 622–639.
- Sugiyono. (2020). *Metodologi Penelitian Kuantitatif, Kualitatif dan R & D*.

- Udiani, N. N., & Hidayat, E. (2025). Hubungan Beban Kerja Dan Beban Akademik Dengan Tingkat Stres Pada Mahasiswa Non Reguler Tingkat Akhir Di Universitas Widya Nusantara: Penelitian. *Jurnal Pengabdian Masyarakat Dan Riset Pendidikan*, 3(4), 3794–3802.
- Wang, Y., Lei, S.-M., & Fan, J. (2023). Effects of mindfulness-based interventions on promoting athletic performance and related factors among athletes: A systematic review and meta-analysis of randomized controlled trial. *International Journal of Environmental Research and Public Health*, 20(3), 2038.
- Zsofia P.Cohen¹, Kelly T.Cosgrove^{1, 2}, Elisabeth Ake-
man¹, Sara Coffey³, Kent Teague^{3, 4}, J. H.-G.
(2021). The effect of a mindfulness-based stress
intervention on neurobiological and symptom
measures in adolescents with early life stress: a
randomized feasibility study.