

# Scientific And Pedagogical Foundations Of The Relationship Between Physical Activity And Psychological Resilience In University Students

N.N. Davronov

Master's Student Asia International University, Uzbekistan

**Received:** 18 December 2025; **Accepted:** 08 January 2026; **Published:** 11 February 2026

**Abstract:** Increasing academic pressure, psychological stress, and digital dependence in higher education have reduced students' physical activity and negatively affected their mental well-being. Therefore, developing psychological resilience has become an important pedagogical task. This article examines the relationship between physical activity and psychological resilience in university students from a scientific and pedagogical perspective. The role of regular physical exercise in enhancing stress tolerance, emotional stability, motivation, and academic performance is analyzed. Pedagogical mechanisms for integrating physical activity into the educational environment are also discussed. The findings show that systematic physical activity serves as an effective tool for strengthening students' psychological resources and promoting holistic development in higher education.

**Keywords:** Physical activity, psychological resilience, student well-being, higher education, stress tolerance, healthy lifestyle, pedagogy.

**Introduction:** Modern higher education is characterized by intensive academic workloads, psychological pressure, and increasing digitalization. These conditions significantly influence students' lifestyles and reduce their level of physical activity. As a result, many students experience stress, emotional instability, and reduced academic performance. Developing psychological resilience has therefore become one of the main objectives of contemporary pedagogy. Physical activity plays a crucial role in supporting both physical and mental health, making it an important educational tool.

## METHOD

Physical activity contributes significantly to students' physical, psychological, and social development. Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in

physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-control, which are essential qualities for successful learning and social integration in higher education environments.

Physical activity contributes significantly to students' physical, psychological, and social development. Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-control, which are essential qualities for successful learning and social integration in higher education environments.

Physical activity contributes significantly to students' physical, psychological, and social development.

Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-control, which are essential qualities for successful learning and social integration in higher education environments.

Physical activity contributes significantly to students' physical, psychological, and social development. Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-control, which are essential qualities for successful learning and social integration in higher education environments.

Physical activity contributes significantly to students' physical, psychological, and social development. Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-control, which are essential qualities for successful learning and social integration in higher education environments.

Physical activity contributes significantly to students' physical, psychological, and social development. Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-

control, which are essential qualities for successful learning and social integration in higher education environments.

Physical activity contributes significantly to students' physical, psychological, and social development. Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-control, which are essential qualities for successful learning and social integration in higher education environments.

Physical activity contributes significantly to students' physical, psychological, and social development. Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-control, which are essential qualities for successful learning and social integration in higher education environments.

Physical activity contributes significantly to students' physical, psychological, and social development. Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-control, which are essential qualities for successful learning and social integration in higher education environments.

Physical activity contributes significantly to students' physical, psychological, and social development. Regular exercise improves cardiovascular health, strengthens immunity, and supports musculoskeletal

balance. At the same time, it reduces anxiety and depression by stimulating the production of endorphins and serotonin. Students who engage in physical activity demonstrate better concentration, memory, and motivation. Furthermore, sport promotes discipline, responsibility, teamwork, and self-control, which are essential qualities for successful learning and social integration in higher education environments.

## **RESULTS AND DISCUSSIONS**

Research findings indicate that systematic physical exercise lowers cortisol levels and stabilizes emotional states. Students involved in regular sports activities show higher stress tolerance, positive mood, and adaptive behavior. Pedagogically, physical activity enhances classroom climate, encourages cooperation, and increases engagement. Therefore, integrating innovative sports technologies and student-centered approaches in universities is essential for strengthening psychological resilience and academic success.

Research findings indicate that systematic physical exercise lowers cortisol levels and stabilizes emotional states. Students involved in regular sports activities show higher stress tolerance, positive mood, and adaptive behavior. Pedagogically, physical activity enhances classroom climate, encourages cooperation, and increases engagement. Therefore, integrating innovative sports technologies and student-centered approaches in universities is essential for strengthening psychological resilience and academic success.

Research findings indicate that systematic physical exercise lowers cortisol levels and stabilizes emotional states. Students involved in regular sports activities show higher stress tolerance, positive mood, and adaptive behavior. Pedagogically, physical activity enhances classroom climate, encourages cooperation, and increases engagement. Therefore, integrating innovative sports technologies and student-centered approaches in universities is essential for strengthening psychological resilience and academic success.

Research findings indicate that systematic physical exercise lowers cortisol levels and stabilizes emotional states. Students involved in regular sports activities show higher stress tolerance, positive mood, and adaptive behavior. Pedagogically, physical activity enhances classroom climate, encourages cooperation,

and increases engagement. Therefore, integrating innovative sports technologies and student-centered approaches in universities is essential for strengthening psychological resilience and academic success.

Research findings indicate that systematic physical exercise lowers cortisol levels and stabilizes emotional states. Students involved in regular sports activities show higher stress tolerance, positive mood, and adaptive behavior. Pedagogically, physical activity enhances classroom climate, encourages cooperation, and increases engagement. Therefore, integrating innovative sports technologies and student-centered approaches in universities is essential for strengthening psychological resilience and academic success.

Research findings indicate that systematic physical exercise lowers cortisol levels and stabilizes emotional states. Students involved in regular sports activities show higher stress tolerance, positive mood, and adaptive behavior. Pedagogically, physical activity enhances classroom climate, encourages cooperation, and increases engagement. Therefore, integrating innovative sports technologies and student-centered approaches in universities is essential for strengthening psychological resilience and academic success.

Research findings indicate that systematic physical exercise lowers cortisol levels and stabilizes emotional states. Students involved in regular sports activities show higher stress tolerance, positive mood, and adaptive behavior. Pedagogically, physical activity enhances classroom climate, encourages cooperation, and increases engagement. Therefore, integrating innovative sports technologies and student-centered approaches in universities is essential for strengthening psychological resilience and academic success.

Research findings indicate that systematic physical exercise lowers cortisol levels and stabilizes emotional states. Students involved in regular sports activities show higher stress tolerance, positive mood, and adaptive behavior. Pedagogically, physical activity enhances classroom climate, encourages cooperation, and increases engagement. Therefore, integrating innovative sports technologies and student-centered approaches in universities is essential for strengthening psychological resilience and academic success.

## **CONCLUSION**

Physical activity and psychological resilience are closely

interconnected in university students. Regular exercise improves stress tolerance, emotional balance, and academic effectiveness. Integrating physical education with psychological development in higher education institutions is a scientific and pedagogical necessity. Promoting healthy lifestyles and providing institutional support will contribute to the formation of a physically and morally mature generation.

**REFERENCES**

1. Abdurahmonov, F. (2020). Theory of Physical Education. Tashkent: Fan.
2. Ahmedov, N. M., & Sobirov, A. S. (2019). Theory and Methods of Physical Education and Sports Training. Tashkent: Fan va texnologiya.
3. Karimov, I. A. (2019). A Harmoniously Developed Generation is the Foundation of Uzbekistan's Progress. Tashkent: Uzbekistan.
4. Karimov, A. (2019). Methods for increasing students' motivation for physical education. Uzbek Journal of Pedagogy, 4(2), 35–42.
5. Matyoqubov, Sh. (2021). The impact of physical education on the learning process. Scientific Journal of Physical Culture and Sport, 2(3), 55–63.
6. Zimbardo, P. (2018). Psychology. Tashkent: Sharq.
7. Xodjayev, B. (2021). Pedagogical Technologies. Tashkent: TDPU.
8. Utemuratova, D. N. (2025). Physical activity levels among students. Journal of Science-Innovative Research in Uzbekistan, 3(7).
9. Eshnazarov, J. E. (2008). History and Management of Physical Education. Tashkent.
10. Masharipov, Y. (2016). General and Sports Psychology. Tashkent.