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Examining the Relationship Between Students' Physical Activity and Academic Achievement: A Narrative Review

Öğrencilerin Fiziksel Aktivitesi ile Akademik Başarısı Arasındaki İlişkinin İncelenmesi: Anlatısal Bir Literatür Değerlendirmesi

Abstract

Physical activity has increasingly been recognized as an important factor supporting not only students' physical health but also various dimensions of learning and academic development. This study aims to examine the relationship between students' physical activity and academic achievement by synthesizing findings reported in the existing literature. A narrative literature review approach was employed to analyze scholarly publications and institutional reports addressing the associations between physical activity, cognitive functioning, learning motivation, attention, memory, and educational outcomes. The reviewed evidence suggests that regular participation in physical activity is generally associated with improved attention, greater engagement in learning, enhanced psychological well-being, and more favorable academic performance. In contrast, insufficient physical activity has frequently been linked to sedentary behavior, reduced concentration, lower learning motivation, and less satisfactory educational outcomes. The literature further indicates that school-based physical education and organized sports activities contribute not only to students' physical development but also to the development of cognitive, emotional, and social competencies that support the learning process. Overall, the findings highlight that promoting regular physical activity within educational settings may contribute to students' holistic development and create supportive conditions for academic achievement. Accordingly, strengthening opportunities for participation in quality physical education and school-based physical activities may represent an important component of educational policies aimed at improving student well-being and learning outcomes.

Keywords: physical activity, academic achievement, physical education, students

Öz

Fiziksel aktivite, öğrencilerin yalnızca fiziksel sağlıklarının korunmasında değil, aynı zamanda öğrenme süreçlerinin ve akademik gelişimlerinin desteklenmesinde de önemli bir unsur olarak değerlendirilmektedir. Bu çalışmanın amacı, öğrencilerin fiziksel aktivitesi ile akademik başarıları arasındaki ilişkiyi mevcut bilimsel literatür doğrultusunda incelemektir. Araştırmada anlatısal literatür derlemesi yöntemi benimsenmiş; fiziksel aktivitenin bilişsel işlevler, öğrenme motivasyonu, dikkat, bellek ve akademik performans üzerindeki etkilerini ele alan ulusal ve uluslararası çalışmalar değerlendirilmiştir. İncelenen çalışmalar, düzenli fiziksel aktivitenin öğrencilerin dikkat düzeylerini, öğrenmeye katılımlarını ve psikolojik iyi oluşlarını destekleyebildiğini, bunun da akademik performansa olumlu katkılar sağlayabildiğini göstermektedir. Buna

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karşılık, yetersiz fiziksel aktivitenin hareketsiz yaşam biçimi, dikkat dağınıklığı, düşük öğrenme motivasyonu ve akademik performansta gerileme ile ilişkilendirildiği görülmektedir. Ayrıca okul temelli beden eğitimi uygulamaları ile düzenli sportif etkinliklerin öğrencilerin yalnızca fiziksel gelişimlerini değil, aynı zamanda bilişsel, duygusal ve sosyal gelişimlerini de desteklediği; bu gelişimlerin öğrenme sürecine dolaylı katkılar sunduğu anlaşılmaktadır. Sonuç olarak, eğitim ortamlarında düzenli fiziksel aktivitenin teşvik edilmesi, öğrencilerin bütüncül gelişimini destekleyebilecek ve akademik başarılarını güçlendirebilecek önemli uygulamalardan biri olarak değerlendirilebilir.

Anahtar Kelimeler: fiziksel aktivite, akademik başarı, beden eğitimi, öğrenciler

Introduction

In contemporary times, physical activity is regarded not only as a means of preserving health but also as a crucial factor in enhancing the quality of education. Physical exercise improves blood circulation, activates brain functions, and contributes to the development of cognitive skills such as attention and memory. According to the recommendations of the World Health Organization (2010), regular physical activity is essential for the healthy development of children and adolescents. UNESCO (2015) emphasizes that quality physical education programs play a significant role in shaping students' social and academic competencies. As highlighted in the OECD (2019) report, physical activity has a direct positive impact on educational outcomes and increases students' motivation to learn. Learning achievements serve as indicators of educational outcomes. The level of a student's mastery of the subject, the methods employed by the teacher, the organization of the lesson, and the learning environment directly influence these achievements. High academic achievement demonstrates that the learner has properly assimilated the instructional material and is able to apply it in practice.

Learning achievements are generally manifested in the following directions:

- Acquisition of theoretical knowledge
- Development of practical skills
- Logical and creative thinking
- Ability to work independently
- Communication and collaboration skills

In contemporary education systems, possessing only theoretical knowledge is not considered sufficient; the physical and psychological well-being of learners plays a crucial role. The level of physical preparedness is regarded as one of the key factors directly affecting students' overall development, health, and learning outcomes. Physically active students tend to be more attentive, energetic, and engaged throughout the learning process.

Physical preparedness primarily refers to the development of students' agility, endurance, speed, strength, and coordination skills. These qualities are continuously shaped and enhanced through physical exercises, sports activities, and physical education classes. Students with higher levels of physical fitness demonstrate improved blood circulation and brain function, which in turn strengthens their ability to concentrate and retain information compared to their peers. Physical

activity also has a positive impact on learners' psychological state. Sports and active games help reduce emotional tension and stress while increasing self-confidence. Such students participate more freely in lessons and complete assigned tasks with greater responsibility. Consequently, significant progress is observed in their academic performance.

Ensuring the health of society and fostering an active lifestyle among its members requires diverse means of physical education. In the scientific-pedagogical literature, gymnastics, games, tourism, and sports are considered fundamental in this regard (Paşayev & Rüstəmov, 2002).

Method

This study was conducted using a narrative literature review approach. Relevant academic sources, institutional reports (World Health Organization, UNESCO, OECD), and pedagogical literature addressing the relationship between students' physical activity and academic achievement were identified and thematically synthesized in order to construct the theoretical framework presented in this article.

Discussion

A growing body of evidence points to a direct link between regular physical activity and students' academic achievement. Students who engage in sports demonstrate higher levels of learning motivation, attention, and memory, which in turn leads to more active participation in the educational process. Research by Bailey (2006) notes that physical education and sports activities in schools not only foster the development of students' social skills but also contribute to the improvement of academic performance. Similarly, Trudeau and Shephard (2008) emphasize that school-based physical activity and sports lessons enhance students' academic outcomes while simultaneously strengthening their resilience to stress. Taken together, this evidence positions physical activity as more than a health factor — it emerges as a meaningful determinant of educational success. Physical education classes in schools play a crucial role in shaping students' healthy lifestyles. These lessons are not merely a means of physical development but also serve to cultivate qualities such as discipline, teamwork, and goal orientation. Properly organized physical activities by teachers enhance students' interest in lessons, increase their attention, and contribute to the overall improvement of educational outcomes.

Physical education lessons should be structured in accordance with students' abilities and strengths, while also fostering their intellect and needs, and carefully considering the psychological characteristics of children at different ages. In addition to these pedagogical requirements, such lessons must be based on students' interests. The onset of puberty is characterized by changes in the nervous system and psychological state. However, the cardiovascular system adapts well to physical loads aimed at speed and endurance. Children at this age are easily excitable, tire quickly, and often lack persistence. Their mood fluctuates significantly. The increase in muscular strength

may lead to tendencies of exaggerating their physical power. During this period (especially among boys), the sense of companionship develops strongly. It is therefore important to transform students' interest in games into a habitual practice. Beginning from the 5th grade, it is necessary to select games separately for boys and girls. When choosing games for girls, particular caution is required: the pace and duration of the games should be reduced, the weight of stuffed balls should be relatively lighter, and rhythmic movements as well as dance elements should be incorporated. For boys and girls aged 11–15, games must be selected with consideration of their anatomical and physiological developmental characteristics. Such games should include strength and endurance exercises, as well as movements that accelerate the development of the chest. Games involving running and jumping over various distances can serve this purpose. In girls aged 15–18, growth in height slows down. Ossification of the skeleton and the increase in muscular strength are largely completed. Conditions should be created to improve the functioning of the respiratory organs and to foster endurance, while the activity of the central nervous system also improves. As with boys, the sense of companionship strengthens among girls, and through various games they strive for flexibility and grace. In boys aged 15–16, growth in height slows, while the body expands in breadth and muscle mass increases. This results in noticeable improvements in strength, agility, and coordination of movements.

Adolescents aged 15–18 should approach physical education lessons with caution, gradually increasing speed and distance. In this age group, active games should be applied less frequently compared to earlier grades. Instead, such games play a supplementary role — serving as practice games, warm-up activities, or active rest between exercises. Games involving running, jumping, throwing, and various relays, as well as ball games and competitive activities, are recommended. More complex active games assist students in mastering the basic rules of sports, acquiring technical and tactical movements, and learning refereeing skills. Active games are applied across all areas of the physical education system and are assigned the following tasks:

- *Strengthening health, ensuring proper physical development, and enhancing general work capacity.

- *Achieving comprehensive physical development.

- *Acquiring essential motor habits and specific knowledge necessary for life.

- *Cultivating moral and volitional qualities essential to students' holistic development.

Collective active games are incorporated into students' physical education programs. During the first three years of instruction, physical education lessons allocate more time to active games compared to other activities. In the 4th and 5th grades, active games continue to be widely used. However, in grades 6–8, active games gradually give way to gymnastics and track-and-field athletics as the dominant forms of physical activity.

Intellectual activity requires every student to know their place, prepare themselves for participation in useful labor, assume responsibility before society, and acquire scientific as well as moral-ethical knowledge. Moral education is impossible without activity. Among the factors that stimulate human activity, games, labor, learning, and sports play a significant role. A student reveals their human qualities only in the process of work and activity.

The relationship between physical activity and academic achievement has been systematically examined in various studies. The systematic review conducted by Singh et al. (2012) demonstrates that physical activity positively influences students' school performance, with effects evident in both the short and long term. Rasberry et al. (2011) provide further evidence that school-based physical education classes and sports activities not only enhance students' academic outcomes but also foster the development of their social skills. Collectively, this body of evidence positions physical activity as both a health practice and a driver of academic achievement.

At the level of general secondary education (Grades V–IX), students' overall learning outcomes are as follows:

- Strengthening health and developing physical fitness by adhering to medical-hygienic rules and performing effective movement complexes.
- Mastering techniques and execution methods of movements related to various sports.
- Developing motor abilities through the use of effective and purposeful movement complexes.
- Observing safety rules, protection, and self-defense during physical education activities.
- Defining roles in teamwork, assuming leading and decisive positions when necessary.

The subject of physical education consists of content lines that are interrelated and complement one another:

- Information provision and theoretical knowledge
- Motor skills and habits
- Motor abilities
- Formation of moral-volitional qualities.

In the modern era, physical education continues to hold particular significance for strengthening public health, supporting the harmonious development of personality, and preparing young people for both productive work and civic responsibility.

Taken as a whole, the evidence reviewed here shows that physical education shapes not only students' physical development but also their academic outcomes. Regular physical activity enhances attention, memory, motivation, psychological well-being, and discipline. Therefore, physical education classes in schools should be given particular importance, ensuring active student

participation. Healthy and active students achieve higher learning outcomes and become valuable, engaged members of society.

Conclusion

The evidence presented in this study indicates that physical activity significantly influences not only students' health indicators but also their academic achievement. Regular engagement in sports enhances students' learning motivation, strengthens their psychological resilience, and fosters the development of social skills. According to the recommendations of the World Health Organization (2010), physical activity should be considered an integral component of the educational process. UNESCO (2015) emphasizes that quality physical education programs not only improve academic outcomes but also contribute to students' social integration and overall development. This body of evidence points to a strong connection between physical activity and education, underscoring the value of expanding research in this area. Ultimately, raising students' level of physical preparedness positively affects both their physical development and academic achievements. The research results can be applied in general education schools, sports-oriented curricula, and the organization of physical education lessons. Based on these findings, they may be utilized in teachers' methodological activities, in assessing students' physical preparedness, and in promoting a healthy lifestyle.

Author Contributions

Zulfiyya Yolchiyeva solely conceived and designed the study, conducted the literature review, analyzed and interpreted the data, drafted the manuscript, and completed all revisions. The author read and approved the final version of the manuscript.

References

- Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *Journal of School Health*, 76(8), 397–401.
- OECD. (2019). *Making physical education dynamic and inclusive for 2030: International curriculum analysis*. OECD Publishing. <https://doi.org/10.1787/7abe6b02-en>
- Paşayev, Ə. X., & Rüstəmov, F. A. (2002). *Pedagogy: New course*. Çarşıoğlu.
- Rasberry, C. N., Lee, S. M., Robin, L., Laris, B. A., Russell, L. A., Coyle, K. K., & Nihiser, A. J. (2011). The association between school-based physical activity, including physical education, and academic performance: A systematic review of the literature. *Preventive Medicine*, 52(Suppl 1), S10–S20.
- Singh, A., Uijtdewilligen, L., Twisk, J. W., van Mechelen, W., & Chinapaw, M. J. (2012). Physical activity and performance at school: A systematic review of the literature including a methodological quality assessment. *Archives of Pediatrics & Adolescent Medicine*, 166(1), 49–55.

Trudeau, F., & Shephard, R. J. (2008). Physical education, school physical activity, school sports and academic performance. *International Journal of Behavioral Nutrition and Physical Activity*, 5, Article 10.

UNESCO. (2015). *Quality physical education: Guidelines for policy-makers*. UNESCO Publishing.

World Health Organization. (2010). *Global recommendations on physical activity for health*. WHO Press.